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AMIGA COMPUTING

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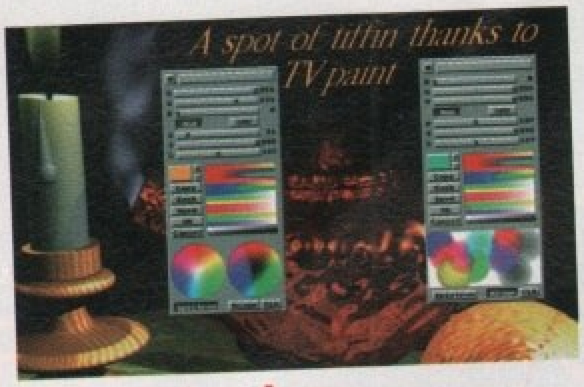
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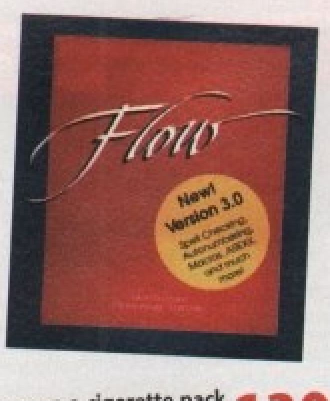
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For more than three years *Amiga Computing* has been the leading magazine for Amiga enthusiasts. As a key member of the Europress magazine group, *Amiga Computing*, promises to inform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available.

Amiga Computing • Atari ST User • PC Today Shareware Shopper • The Micro User Games-X • Amiga Action • ST Action Computer Trade Weekly

SPECIALS





COVER FEATURE



THE COVERDISK

Prodata v1.2
A FREE look at the latest version of the most popular Amiga database. This version saves small files

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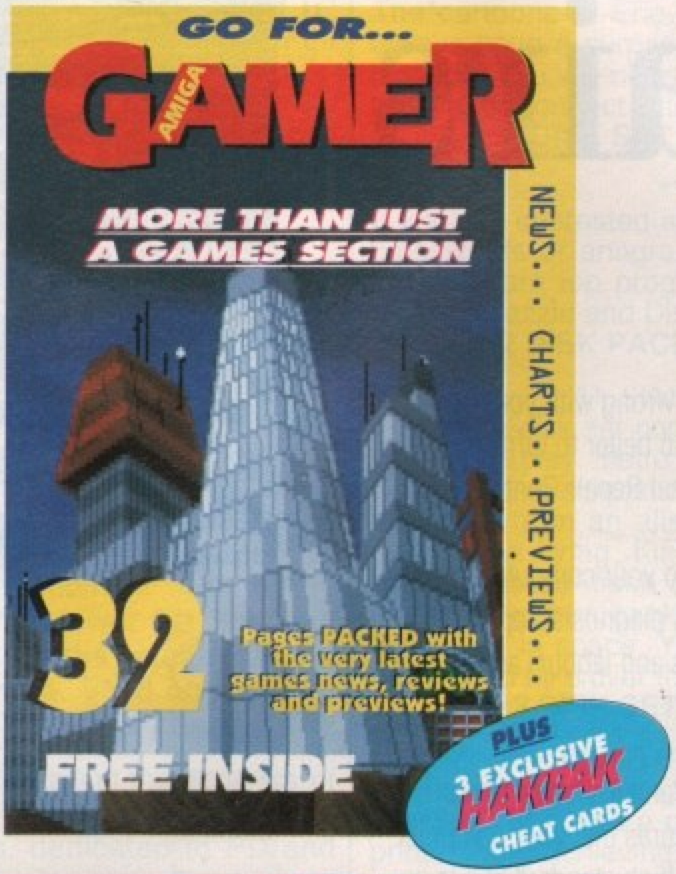
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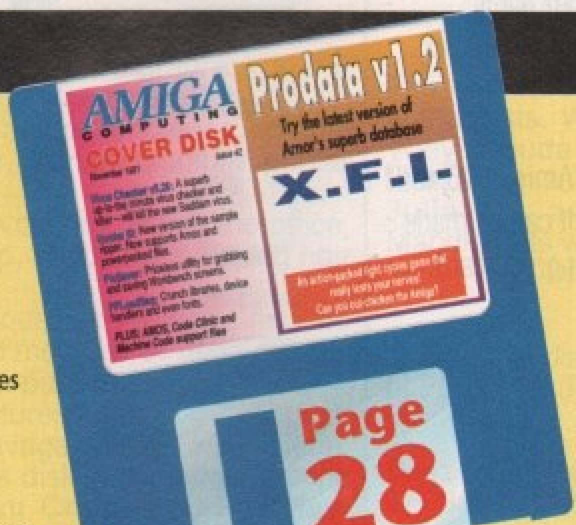
6 GREAT
Subscription offers for new readers
Turn to Page 100

REGULARS

Hunter III
The latest version of our popular sample ripper is compatible with Amos sample banks and powerpacked files

Picsaver
Grab and save windows, screens or brushes with this handy Workbench utility

PLUS
Fonts from UGA, PPLoadSeg, and a program to update last month's CanDo Extras disk.



Grand Grab



The *Amiga Computing* **GRAND GRAB** goes from strength to strength with more **massive** giveaways!

Have you got last month's *Amiga Computing* handy? Check the winning numbers published this month against your number and see if you have won a fantastic GOLDEN IMAGE scanner!

You can also find out how the number on this month's cover could win you a copy of DPaint IV or one of over fifty top games. 121

G.T.S.

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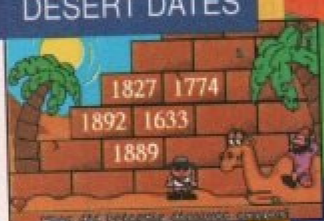
Sing along with DJ Ted to popular nursery rhymes.

TYPING



Type the correct letters and words and save Freddy from the crocodile.

DESERT DATES



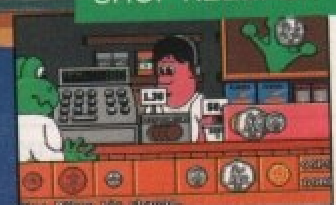
Study historical events to find the secrets of the pyramids.

TEDDY'S BOOKS



Select the correct number of Teddy's bedtime book.

SHOP KEEEPER



Shop with Freddy and his friends choosing coins to pay the bill.

EXCHANGE RATES



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Archimedes and PCW versions will follow in early 1992.
Spectrum, C64 & CPC available early November.
Amiga ST & PC available end of October.

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WHAT'S new

A500P on its way for UK

AMIGA COMPUTING exclusive

Commodore tell John Butters what the Amiga's getting for Christmas

AT AN exclusive press briefing recently, Commodore told *Amiga Computing* that the A500 Professional will go on sale in the UK early next year and gave details of other plans for the Amiga family.

The A500P, which has been available in the States for several months, is based on the A500 but is fitted with the enhanced chip set, one megabyte of memory and runs the Workbench 2 operating system.

The enhanced chip set includes the Super Agnes and Super Denise chips which give the computer improved sound and graphics, and Workbench 2 is an improved version of the operating system with a more attractive appearance and added features.

While Commodore have not fixed a price or marketing plan for the machine, experts believe the price will stay at or close to the current £399.99.

The move casts doubt on whether A500 owners will have an option to upgrade their operating system to Workbench 2 but as *Amiga Computing* exclusively confirmed last month, upgrades for other models in the family will be available by the end of the year. But even before A500Ps arrive, standard A500s are to have one megabyte of memory.

The computer has always had half a megabyte of ram, and for several months had a 512K upgrade included in the box. The extra power will make the A500 an attractive buy for most home applications, such as wordprocessing and accounts.

The new version, which could be available before Christmas, will have the additional memory already fitted to the motherboard and its price will remain at £399.99.

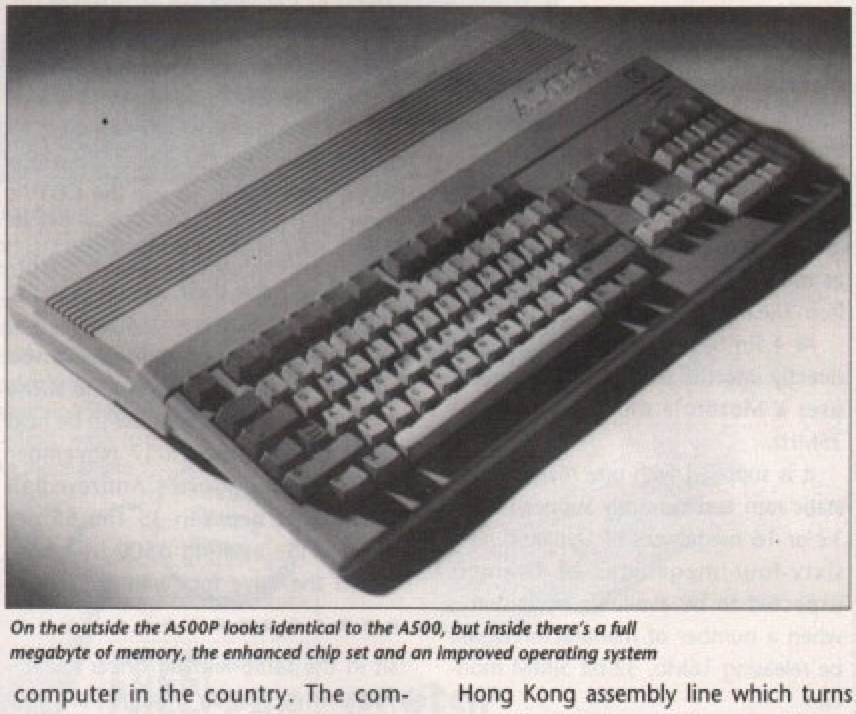
It will feature in the Cartoon Classics bundle, which will be at the centre of a £3.5 million television advertising campaign during Christmas.

The A500 is the firm's best selling version of the Amiga, with 675,000 units already in the UK and a forecast of growth of a further 180,000 by the end of this year.

With 1991 sales of 250,000, the Amiga remains the best selling home computer in the country. The computer's success has led to the firm building a $9.1 million assembly plant in the Philippines.

To be opened in February 1993, the factory will be used for overspill production from the company's existing Hong Kong assembly line which turns out "hundreds of thousands" of machines each year.

Meanwhile, the firm's German plant in Braunsweig will continue to manufacture computers higher in the Amiga range.



On the outside the A500P looks identical to the A500, but inside there's a full megabyte of memory, the enhanced chip set and an improved operating system

First 040 for A3000

AS the A2000 sees new 68040 accelerators nearly each month, *Amiga Computing* has received details of the first 68040 board for the A3000.

Denver-based Progressive Peripherals and Software have just released the Progressive 040/3000 which plugs into the computer's processor slot beneath the floppy disk drive.

Using software supplied with the A3000, users can switch between the machine's original 68030 and the 040/3000. Under the increased power, a 16MHz A3000 will run at six times its normal speed and a 25MHz A3000 will be four times faster.

The chip's performance is rated at 19.2 MIPS and it has a built in maths co-processor. The accelerator does not have additional memory and costs $1,795.

Progressive are also to send Video Blender to the UK. A professional video switching system for all versions of the Amiga, it provides video switching, genlocking, local background screen colour generation in 16 million colours and a variety of video fades. A stereo sound mixer is also included.

Video Blender can mix and manipulate composite video, NTSC RGB and Amiga RGB video outputs, and an internal colour generator produces up to 16 million background colours. The unit is also PAL compatible.

Video Cameras and 24-bit framebuffers can be attached to the set up to give special video effects.

Multiple video inputs can be synchronised without time-base corrector hardware and stereo audio channels can be synchronised with video.

It has full linear keying over 256 levels, so superimposed graphics can be anti-aliased to just about any degree the user wishes.

Controlled through the Amiga's serial port, the compact unit enables 256 levels of red, green and blue colours to be mixed.

An unlimited number of wipes and other effects are available through MixMaster software. UK pricing for both on calling Marcam (081-941 6117).

Amiga makes French music

MUSIC program Audio Sculpture is the first Amiga package to come from French company Expose Software.

It is described as being a powerful music tool which enables users to create music from the beginning to the end. Tools include a high quality soundtracker, a sampler which includes a sample editing interface and sound synthesis which allows synthesiser type sounds to be generated.

A data disk is supplied which has modules and samples and the program is accompanied with an "easy to understand" manual. It will be distributed in the UK for £49.99 by the Software Management Group who can be contacted on 0274 566155.

WHAT'S new

CDTV gets CES support

COMMODORE used the recent trade only Computer Entertainment Show to demonstrate several new CDTV software products but were quiet on anything new for the Amiga.

Falcon is a compact disc version of the Amiga shoot-'em-up flight simulator which has you completing several missions at the controls of an F-16 fighter. The most noticeable difference is the sound, with includes an impressive flight briefing with realistic speech.

Trivial Pursuit comes from Domark and the main advantages of the CDTV technology are seen in the questions, with each having a digitised picture relevant to the subject and sound.

The Guinness CD hold all records found in the book but by making the most of the increased storage capacity manages to add illustrations and sound to the software.

The company were expected to unveil their new CD-rom drive which will enable A500s to use the CDTV's compact discs but because EMAP chose to make the show trade only, had to re-think their strategy for the different audience.

Experts believe that the A690 will now be shown for the first time at the World of Commodore Show to be held in London on the 15-17 November 1991. Commodore's Andrew Ball claims that between 35 and 65 per cent of the existing A500 user base wants the drive for "wild and wacky games". Scores of new joysticks were released at the show. New models came from Power Play/Sonmax, Cheetah and Spectravideo but the only original design was from Dynamics.

Their Competition Pro Manix Twins are two hand held controllers which operate together. One controls direction using an eight-way switch while the other has three fire buttons and extra control keys for special functions

The entertainment show was also the launching ground for education software from Ablac (0626 332233). Under the banner Edutainment the firm will be selling New Math Blaster Plus! and two Algebra programs.

New Math Blaster Plus! is aimed at children aged between 6 and 12 to improve maths skills in six skill levels. It covers addition, subtraction, multiplication, division, fractions, decimals and percentages.

Both Algebra packages are for children of more than 13 years old and each have eight sessions teaching different elements of the subject. There are tests and a glossary of 160 terms and definitions. Each program costs £39.95 each.



New joysticks were common at the stands of CES. The most interesting was from Dynamics, with their twin controllers called Pro Manix Twins

Card avoids bottlenecks

USERS of graphics applications on A2000s are being targeted for a new 68040 accelerator card from California-based Computer System Associates (010 1 619 566 3911).

The card, which makes the computer run at three times the speed of the fastest 68030-based Amiga, enables several "performance bottlenecks" to be bypassed.

CSA describe the 40/4 Magnum as a single board computer, rather than just an accelerator, and it works by taking as much processing work as possible from the motherboard.

At 4.5in by 13.8in, the board plugs directly into the A2000's CPU slot and uses a Motorola 68040 running at 25MHz.

It is supplied with one megabyte of static ram and currently supports 4, 8, 12 or 16 megabytes of Dynamic ram. sixty-four megabytes of Dram is expected to be available by January, when a number of manufacturers will be releasing 16Mb, 32-bit SIMM modules.

"Installing an SBC like the 40/4 Magnum is like adding a second, more powerful 1992-model engine, transmission and cargo trailer to your favourite 1985-model car," said CSA's Steve Riker.

"Not only can you drive faster and haul more luggage, you can still put in the same kind of gas as before and still sit in the same familiar driver's seat – you even get better mileage from your old engine because the new engine has taken over much of the work."

"By removing the Amiga's speed bottlenecks the 40/4 Magnum makes the Amiga and its software base a viable alternative for video, graphics and animation professionals."

40/4 Magnum runs at 20 MIPS and costs £3,995.

Sysops get BBS package

DLG PROFESSIONAL is a communications program being aimed at high-end hobbyists and the professional bulletin board market that has just been released for the Amiga.

The program is made up of a group of interrelated modules and commands rather than a single large application to enable it to have a low memory overhead and full multi-user, multi-tasking of all functions and operations.

DLG Professional's features include multi-line capability, conferencing, compatibility with FidoNet electronic mail and echomail conferencing protocols and UseNet, a network used by researchers, software firms, universities and governments.

The software is based on AmigaDOS, which enables standard CLI-based programs to be incorporated into a DLG bulletin board set-up. Standard functions of messaging and file transfer are included such as message broadcasting, tagging, bundling and downloading, off-line reading and sysop-configurable file-transfer protocols.

A London-based sysop, Tony Miller, who has been testing the program told Amiga Computing: "With the introduction of DLG Pro as the host software, the user base of my BBS has nearly quadrupled in the year I have been running it and I have needed to add over 600 megs of hard disk to keep up with user demands."

Available for CDN$199 from Telepro Technologies (010 1 306 665 3811).

AMIGA people

Multimedia division opens

COMMODORE have reinforced their commitment to multimedia by opening a new division at their Maidenhead office aimed at promoting the top end Amigas in that field.

It will be headed by Terry Cooke, who moves from the company's business operation and will be staffed by a team of 10 people across the country.

One of the division's responsibilities will be to oversee the training for dealers wishing to become multimedia centres.

Training has already started and Commodore are expected to announce the first 12 centres by the end of November.

Spokesman Andrew Ball told *Amiga Computing* that the centres were to prove "Commodore are at the forefront of the market in education, corporate, dealers and distribution".

A2000s and A3000s are soon to have special multimedia software bundled with them. Commodore say they will be addressing the needs of the market with the A2000 heading for video use and the A3000 being sold for corporate presentation.



Terry Cooke moves within Commodore to become head of the firm's new Multimedia Division. The department will promote top end Amigas in the growing multimedia market

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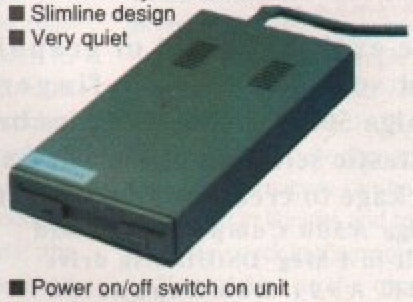
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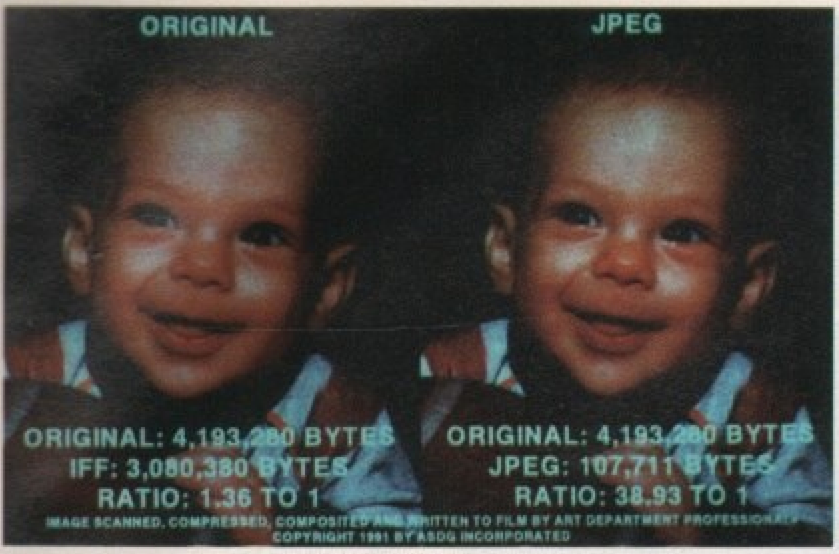
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ADPro becomes the first Amiga package to use JPEG compression

ADPro gets JPEG compression

THE AMIGA has received its first software package to use Joint Photographic Expert Group (JPEG) image compression technology.

JPEG modules have now become a standard part of ASDG Incorporated's Art Department Professional and will enable such files to be loaded and saved. Using this compression technique a true colour or greyscale image can be cut to a fraction of its size without noticeable degradation.

The user specifies how much compression should take place and the firm claims that results of 80 to 1 or better are possible. People using the Amiga in video, print and other imaging related work will be able to keep more images online in a manageable fashion and transmit them more easily.

ADPro files meet the JFIF standard which enables images created on other computers such as IBM PCs and Apple Macintoshes to be exchanged with its own. The UK distributor is Silica Systems (081-309 1111).

Impulse gets foundation

A NEW personal software authoring system has just been announced by Minneapolis-based Impulse Incorporated (010 1 612 566 0221).

Foundation is described as being an expert system for gaining complete control over the Amiga and enabling users to create applications and interactive presentations without programming knowledge.

The package can automate all computer tasks. It records actions with its Macro Recorder, plays back tutorial programs about the software and gives online help with a built in HyperView stack system.

Stacks supplied include the FounDex phone and address stack, Calendar ,the MediaBase animation and a sound and picture database. Each can be modified to add buttons for printing reports, logging on to online services and for simultaneously launching and communicating with other programs.

The software can be used for creating automated business presentations, standalone marketable stackware, personalised home and office organisers and front end screens to control laser disks, video recorders and CD-rom drives.

Users adapt the example stacks and objects that are supplied with the software or by using the FAST-Talk scripting language. A debugger and compiler ensures that routines can be fine-tuned and stored in libraries and tools accessible by any stack in the memory.

"Foundation is the glue that will hold a home office together, and make small businesses profitable and competitive in today's fast moving world," said an Impulse spokesperson.

The program, which does not have a UK distributor, is available for $250, and demonstration disks are available.

WHAT'S new

PC emulation

A NEW adaptor is to be launched at the World of Commodore Show to enable A1500 and A2000 users to plug KCS' Power PC Board into their computers.

The device is necessary for anybody wanting to run the XT emulator on the high end Amigas and is to be closely followed by a software update. It will add VGA and EGA graphics resolutions, but due to restrictions caused by certain software packages the VGA option might be limited to monochrome use only.

It is expected to sell for £25.

Colour laser for £5

A FIRM has just been formed to offer a colour printing service for Amiga users unable to meet the £10,000 price tag for a top quality laser printer.

Computer artists sending a file to Tamworth-based Studio 101 (0827 280884) will receive a printout of their work from a Pantone-registered colour laser printer. The cost of an A4 image is £5, with additional copies available for £2.50.

Files from leading art packages including Deluxe Paint, Pro-Page and Photon Paint are accepted.

Flow gets better

TEXAS based New Horizons (010 1 512 328 6650) have announced changes to their "idea organiser" program, Flow.

Designed to enable the user to enter ideas and thoughts and go back to build the document in a logical constructed manner, it is said to be ideal for teachers, students, journalists and other people who are constantly writing and preparing presentations and articles.

Version 3 of the software includes outline automatic numbering, ARexx support, the ability to create macros, saveable configurations, headers and footers, spellchecking, Workbench 2 enhancements, document information and numerous printing enhancements.

Company president James Bayless: "Flow is the only program of its kind on the Amiga platform and fills a very important need in the market. The continued enhancements of Flow is another indication that New Horizons is meeting its goals and the needs of their users."

Upgrade information is available from New Horizons, while the price for new users is $110.

Music designer launched

BARS and Pipes Professional has been released for composing, recording and designing music with the Amiga.

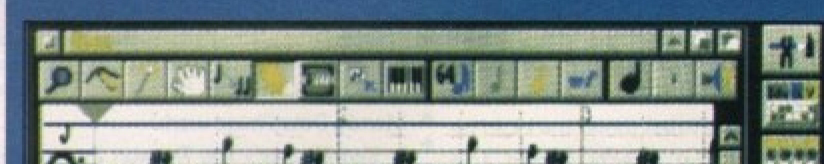
It provides an unlimited number of tracks and notes and the sequencer has all the features normally found as well as the ability to see the music as it plays. There are unlimited methods of editing music in real time.

Tools enable tunes to be enhanced as they are composed, played back or edited and the modules perform standard musical and technical tasks to save time and give a creative edge.

It includes a range of editing options such as an event list, piano roll and music notation that can be seen, heard and changed. By using the mouse, Midi events can be adjusted graphically or numerically and music can be printed at any time.

There is also an automated mixing feature, MixMaestro, which includes real time control of volume, panning and other Midi controllers. As music plays various sliders and knobs adjust the balance of the arrangement.

Running on any Amiga with at least one megabyte of memory, it costs $379 from Atlanta-based Blue Ribbon Soundworks (010 1 404 377 1514). At the time of going to press there was no UK distributor.



Providing an unlimited number of tracks and notes, Bars and Pipes Professional

WHAT'S new

Backup utility

A PROGRAM being flagged as the first full backup system for Amiga hard disk users has been released by Electronic Zoo (0285 641541). MRBackup Professional has more than 60 backup commands for saving to floppy disks or tape streamers and will cost £29.99.

Silica gets Audition 4

SOUND sampling software, Audition 4 is to compete against AudioMaster when it becomes available in the UK soon from Silica Systems (081-309 1111).

Aimed as an upgrade to the software provided free with hardware sound samplers, the program's features include the ability to "try out" an effect without damaging the original sample, its fast operation and large range of distortion effects.

It can sample in mono or stereo, with sample rates of up to 55KHz. There are echos, delays, smoothing, waveform tuning, fade, filter, bass and treble control, cut, copy and paste features and a zoom facility. Audition 4 supports direct to disk recording to its floppy disk format.

Price: £49.99

Studio 16 cards

SUNRIZE Industries' Studio 16 software is being bundled with one of two cards to convert Amigas into professional digital audio workstations. Hours of work can be recorded directly to hard disk and synchronised with timecode.

A complete video sound track can be edited, special effects added and glitches and filter noise fixed. The cards supplied are either 12 or 16-bit samplers.

The AD1012 is a 12-bit sampler card intended as a low cost option for editing video sound tracks. Features including audio in/out, adjustable low pass filters and a SMPTE time code reader.

The 16-bit card, the AD1016, also supports audio in/out, eight times oversampling digital filters, digital in/out for DAT or CD hookup, Midi in/out and SMPTE in.

Call HB Marketing for prices and other information on 0753 686000.



Fun School 4 is set for release in the next few weeks. It continues to teach elements of the National Curriculum with the familiar characters

Teddy and Freddie stay in Fun School

ONE of the most popular series of education programs is set for its fourth release. Fun School 4 retains the popular Teddy and Freddie the Frog and adds Sammy the Spy to the line up of educational fun.

Through a series of interactive learning games, the programs in the new software have been developed to conform to the National Curriculum. For underfives, Teddy returns in a pair of Reeboks and a baseball cap, with six educational programs giving games for art, maths, words, karaoke and others.

Freddie the Frog carries his skateboard to the street for five to seven-year-olds. Freddie features in games covering sequences, maths, word sorting and typing, to improve a child's keyboard skills.

Eight to eleven-year-olds learn with Sammy the Spy, who by travelling the world teaches geography, maths, general knowledge and timetables. Europress Software can be contacted on 0625 859333.

Animation winners chosen

A PANEL of three judges looked at nearly 50 entries for the Amiga Centre Scotland 1991 Animation Competition, held during the recent Edinburgh Festival, before choosing the winning entries.

Split into three categories the winners were as follows. Taking a Harlequin 1500, in first place in the non-commercial category, was Paul Franklin with his Mondo Data Phage work.



Mondo Data Phage won Paul Frankin a Harlequin 1500 in this year's Amiga Centre Scotland Animation Competition

Ken Blackey's The Fly won the commercial category and the Eric Schwartz Award was won with The Dating Game by Eric Schwartz.

Organiser Martin Lowe said: "We were very please to receive nearly 50 entries this year. And also I was very impressed with the creativity, originality and technical quality of many of the animations."

"I would like to give my thanks to the companies who together donated nearly £6,000 worth of prizes and also to the judges who were faced with a difficult task and showed great skill and ingenuity to ensure a fair allocation of winners."

Do you know something we don't?

Although *Amiga Computing* has scores of contacts in the Amiga world we need you. If you have some hot news ring John Butters on the news-desk now on 0625 878888.

All information supplied will be treated in the strictest of confidence.

DIARY DATES

October 11 to 13, 1991
The Computer Market Show
Organiser: Rex Centre
(021-773 9090)
Venue: Rex Centre, Birmingham
A new show, aimed at users shopping for computers, software and consumables at low prices.

3 November, 1991
All Formats Computer Fair
Organiser: Bruce Everiss
(0225 868100)
Venue: Royal Horticultural Hall, London

10 November,1991
Venue: National Motorcycle Museum, Solihull
Brings together a collection of small firms and PD libraries.

15 to 17 November, 1991
World of Commodore
Organiser: ITP Exhibitions
Venue: Earl's Court 2
The 15th Commodore event.

1 December, 1991
All Formats Computer Fair
Organiser: Bruce Everiss
(0225 868100)
Venue: City Hall, Candleriggs, Glasgow

14 December, 1991
Venue: Royal Horticultural Hall, London

15 December, 1991
Venue: University of Leeds Sports Centre, Leeds
Plenty of bargains and heaps of public domain software.

5 to 8 December, 1991
Computer Shopper Show
Organiser: Blenheim Pel
(081-868 4466)
Venue: Wembley Exhibition Halls
An opportunity to buy some bargains before Christmas.

7 to 9 February, 1992
5th International 16-bit Computer Show
Organiser: Westminster Exhibitions
(081-549 3444)
Venue: Novotel Hotel, Hammersmith
The first post-Christmas Amiga show. Expect plenty of bargains.

OVERSEAS EVENTS

1 to 3 November, 1991
Amiga '91 Koln
Organiser: Ami Shows Europe GmbH
(010 49 8092 24086)
Venue: Fairground, Cologne, Germany
The second major German show of the year expects to attract more than 200 exhibitors.

● If your company is organising a show relevant to the Amiga and it's not listed, let us know so we can include the information in the diary.



If your database looks like this, you're ready to face the future.

Given the chance to gaze at the future of database computing, what would you see?

Graphical applications that are intuitive and yet incredibly powerful, supporting sound samples and even pictures.

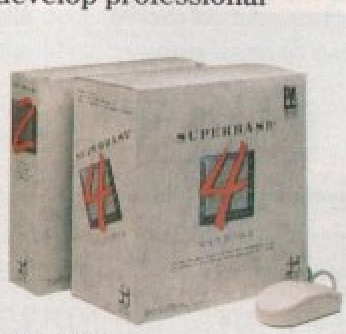
Applications like Superbase 4 Amiga.

Unique features like the VCR panel mean browsing and reporting on data have never been simpler.

Superbase's WYSIWYG Form Designer lets you draw and design forms that are easy to understand and use.

And, with its own comprehensive Database Management Language, you can develop professional applications.

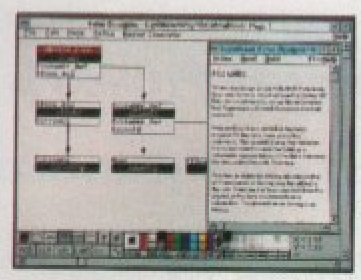
You can share data with users of IBM-compatible PCs, while developers can make sophisticated database solutions available on both Amiga and Microsoft Windows platforms.



All trademarks acknowledged. Screen shot taken on an IBM PC.

Superbase 4 Amiga also supports import/export of dBase, Lotus 1-2-3 and Microsoft Excel files.

So, for your future's sake, clip the coupon, send us your business card or call us on **081 330 7166** to find out more about Superbase 4 Amiga. After all, the benefits are staring you in the face.



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- ☐ Superbase Personal
- ☐ Neither

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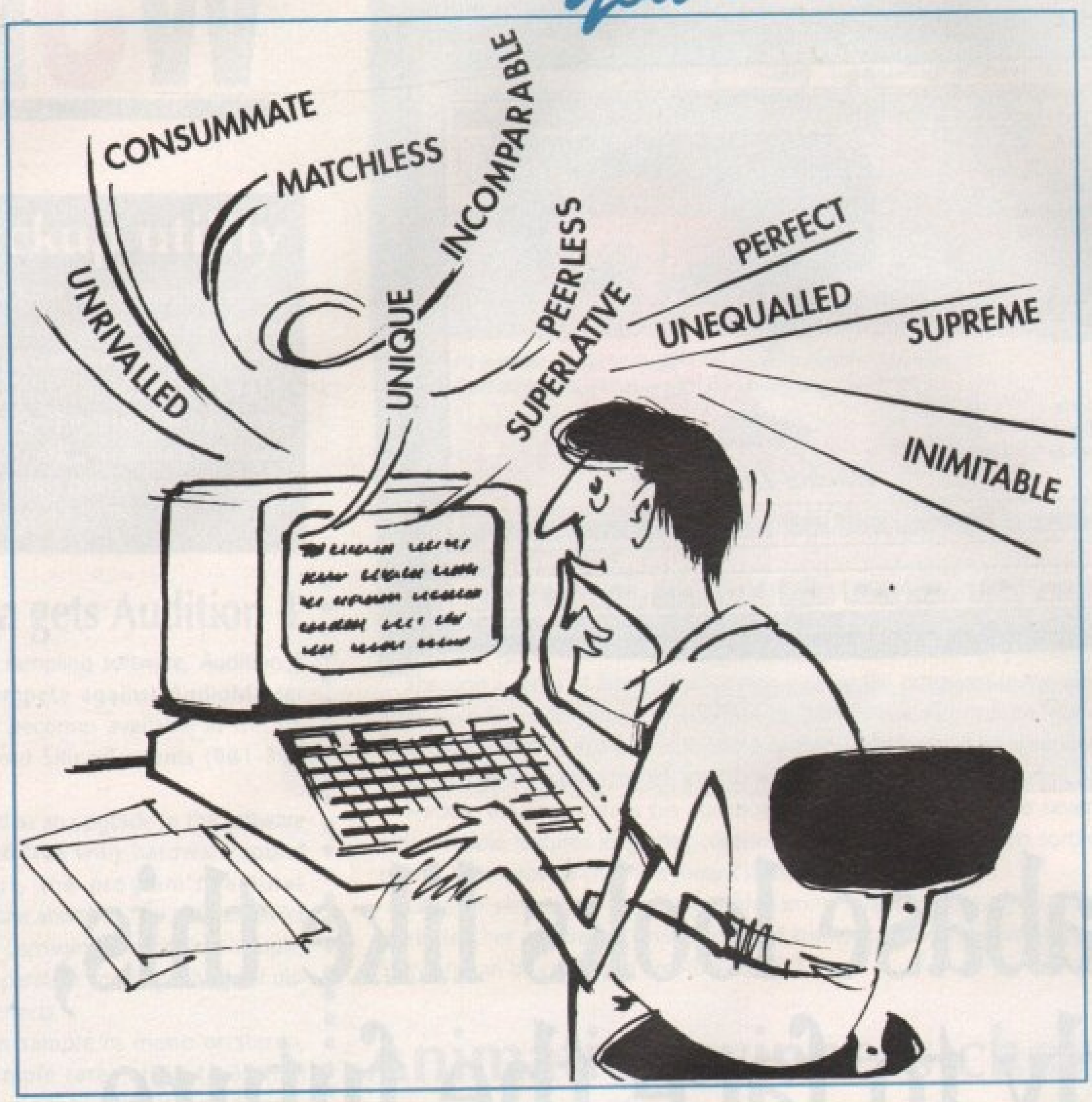
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Tel: 081 330 7166 Fax: 081 330 2089

PROTEXT 5.5

"You won't be lost for words"...



... with Protext 5.5 because the pop-up thesaurus will provide you with inspiration whenever you need it. With words provided by Collins the thesaurus has 43,000 main entries and 827,000 responses!

Protext 5.5 introduces enhanced text formatting options. Automatic hyphenation lets you produce a well-spaced page layout without the bother of manually putting in soft hyphens. Protext determines the correct hyphenation points by algorithms and look-up tables. Elimination of widows and orphans is also provided. You will no longer need to worry about those infuriating single lines at the top or bottom of pages. Protext formats the text to avoid these as you edit the text. Extra blank lines at the top of a page can be suppressed.

New document analysis features provide a wealth of information about your text. You can examine a list of all the words used - alphabetically or by the number of occurrences. Other statistics shown include average word length, average sentence length and a table of the number of lines on each page.

Plus many more improvements . . .

- ☆ Enhanced file selector with different sorting methods, bulk copy and erase.
- ☆ Prodata users - mail merge directly from Prodata files, no need to export.
- ☆ Mail merge: nested repeat loops.
- ☆ New window-based help facilities.
- ☆ Improved line drawing.
- ☆ Spelling checker finds repeated word and missing capital letters.
- ☆ Conversion to and from WordStar 5.5 and Microsoft RTF
- ☆ Full printed documentation of new features.

Of course Protext still includes . . .

Choice of pull-down menu or keyboard operation, extensive printer font support and proportional formatting while editing, up to 36 files open, split screen editing, characters for 30 languages, index and contents, footnotes, newspaper column printing, file sorting, macros, indent tabs, mail merge programming language, exec files and the fastest search and replace around. Altogether the most comprehensive word processing software for your Amiga or ST.

"it's bloody brilliant" — **ST FORMAT**

"one hell of a performer" — **COMPUTER SHOPPER**

"if you need a professional word processor Protext is perfect" — **AMIGA COMPUTING**

"nothing else available comes close" — **ST APPLICATIONS**

PRODATA 1.2

New version of Prodata now with pull-down menus, mouse or keyboard operation, automatic record numbering, merge database, instantaneous filtering, prologue form, edit fields in any order, 2-across label printing. Full details available from Arnor.

Price: £85+VAT, upgrade from v1.1 £30+VAT.

PRICES (including VAT and delivery)

For Commodore Amiga, Atari ST or TT.

Protext 5.5	**£152.75**
Upgrade from 5.0 to 5.5	**£30**
Upgrade from 4.2/4.3 to 5.5	**£60**

Please return your original disks when upgrading

French or German spelling dictionary	**£35.25**

When upgrading please return any extra spell checking dictionaries for a free update to the revised version.

☆ **Both Protext 5.5 and Prodata require 1Mb of memory**

ARNOR

Arnor Ltd (AC), 611 Lincoln Road, Peterborough PE1 3HA. Tel: (0733) 68909 Fax (0733) 67299

AmigaDOS 2.04
Official announcement

ONE bit of news from DevCon that was approved for public consumption was the official release of AmigaDOS release 2 for the Amiga 500 and 2000.

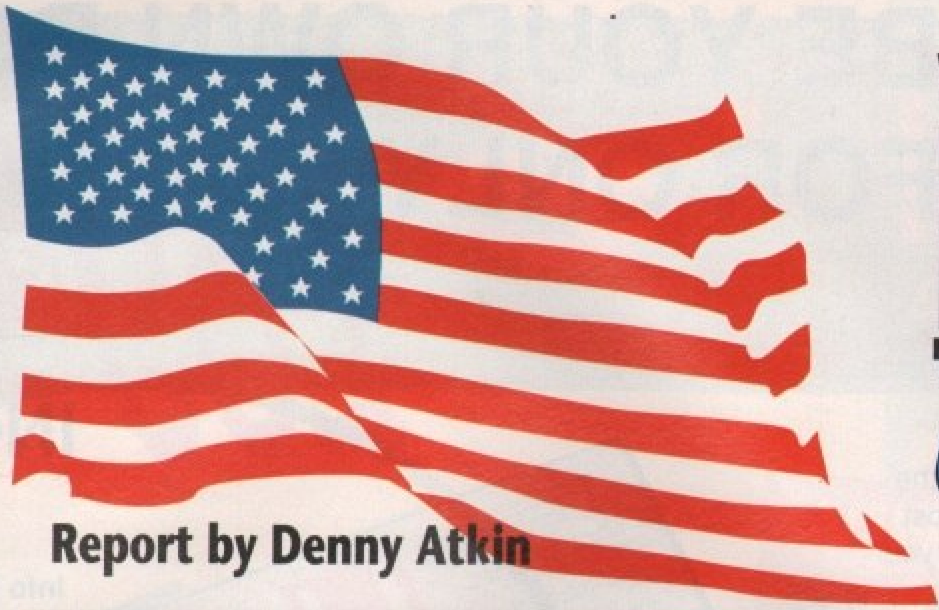
KickStart 2.04 – version 37.175 on the About menu, if you want to check yours – is now available as a disk update for Amiga 3000 owners, and enhancer kits containing disks and roms for the Amiga 500 and 2000 will be available in the US sometime in October.

What this means for a UK release is unknown, since each country's sales company will decide when to release the upgrade. But by October the packages, manuals, roms and disks should be ready to go.

While many users have grown impatient waiting for this AmigaDOS upgrade, it's worth the wait. The release 2.04 of 1991 is very different from the release 2.00 that shipped with the Amiga 3000 in 1990.

Most of the delay resulted from Commodore's wise decision to add a number of routines to make poorly-written software more compatible. It was easy to tell which programs broke the rules under early versions of 2.0 – they invariably crashed. But release 2.04 will run more than 90 per cent of existing Amiga software.

Now there's no reason not to upgrade your Kickstart. And the extra time gave Commodore the chance to finish their Compugraphic outline font technology, giving Amiga owners access to smooth fonts in any size.



WHAT'S new USA

Report by Denny Atkin

Future looks good for Amiga

THE 1991 North American Amiga Developer's Conference was held in Denver, Colorado – the Mile-High City – September 3 to 7. As I write this, I'm flying home from the conference, feeling awfully good about the future of the Amiga.

Unfortunately, most of what was discussed at this year's DevCon is under strict non-disclosure. Developers can't talk about what's coming until after Commodore officially announce any new products.

However, you can take heart in knowing that evidence abounded at DevCon that issues such as better graphics, sound, and new Amiga markets are high priorities in Commodore's future plans.

While the lay offs announced last month were a bit disconcerting, Commodore still have more employees in research and development than in most years previous, and they're hard at work developing neat stuff. One of the highlights of DevCon occurred when members of the CDTV and AmigaDOS release 2 development teams paraded through the Developer's Showcase to the tune of Lemmings. Resplendent in green mop-hair, the large-as-life Lemmings bounced down the stairs, climbed over obstacles, and jumped off hotel furniture carrying umbrellas.

Finally, Bryce Nesbitt and Leo Schwab, blockers extraordinaire, exploded in a blast of confetti and the Lemmings escaped into an elevator, to the applause and laughter of most of the 265 developers in attendance.

1991 Developers' Choice Awards

A number of developers were selected by their peers at DevCon to receive the 1991 Developers' Choice Awards. The winners were:

Best Educational Software:	Distant Suns by Virtual Reality Laboratories
Best Entertainment Software:	Lemmings by Psygnosis
Best Consumer Productivity Software:	AmigaVision by Commodore
Best Professional Productivity Software:	AmigaDOS C Development System by SAS Institute
Best User Interface:	Workbench 2.0 by Commodore
Best Hardware:	Video Toaster by NewTek
Amiga Hall of Fame:	Fish Disks by Fred Fish

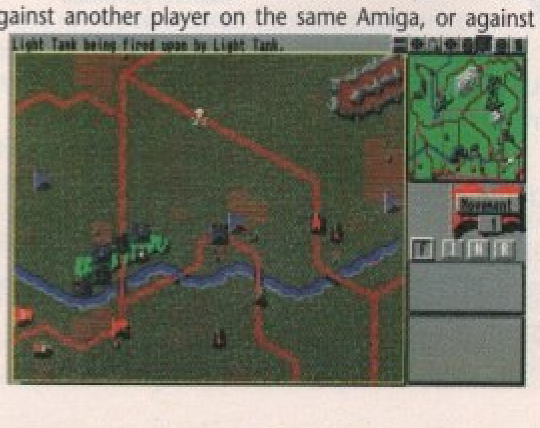
Perfectly fascinating

FROM the creators of Empire, possibly the most addictive war game of all time, comes the Perfect General. Authors Mark Baldwin and Bob Rakosky have outdone themselves with this superbly playable battle game.

Like the earlier Empire, The Perfect General's biggest strength comes from its simplicity. All actions can be initiated with the mouse, joystick or keyboard.

You're not overburdened with minute details like many of the hex-based war games. The computer takes care of minutia such as unit strengths and movement limits. You simply move your units and tell them where to fire.

The game includes 14 scenarios ranging from the simple, speedy First Battle to the more complex Patton Kicks Butt. You have a variety of units at your command, ranging from infantry and tanks to engineers who can build mines and bridges. You can play against the computer, against another player on the same Amiga, or against another Amiga or PC running the Perfect General using a modem.



The game is hard disk-installable, and uses only word-lookup protection. There's a lot of gameplay here for $59.95.

Contact Quantum Quality Productions on 010 1 908 788 2799.

ProWrite Perfected

ONE of the first developers to announce a product that takes advantage of 2.04's CG font technology is New Horizons (010 1 512 328 6650), makers of the ProWrite wordprocessor.

ProWrite 3.2, which should be available by the time you read this, will automatically use larger sized fonts and scale them down to printer resolution when printing. If you're running Workbench 1.3 and have a larger bitmap of the current font in your FONTS: directory, you should see a decent improvement. Output from a 2.04 system, though, will be at your printer's highest resolution, resulting in true jaggy-free printing.

Other improvements include a new "3D look" user interface, even under Kickstart 1.3, key equivalents in requesters, direct insertion of text files into ProWrite documents, exporting of files in Professional Page text format, automatic timed saving of backup files, and a more flexible macro menu, which will allow you to give ARexx macros real names, instead of "Macro_1" and so on.

You no longer need the ProScript add-on to output to PostScript printers. All of ProWrite's features, including fonts, styles, colour, and columns are now supported in PostScript output.

If you have a colour printer, you'll be delighted by ProWrite 3.2's improved colour support. Pictures now preserve their original colour palette – when they're displayed onscreen they automatically map to the closest approximate screen colour. Also, when you resize a picture down and then up in size, the picture doesn't come out blocky any more – the original data is preserved.

Many ProWrite users love everything about the program except its Macintosh-like file requester. Now, Workbench 2.04 users can choose to use the system-standard ASL requester instead. ProWrite 3.2 also adds support for release 2.04's Public Screen feature, so you can now open the wordprocessor on another screen. For instance, you could use it to take notes as text scrolls by on your comms program's screen.

Registered ProWrite owners will be sent upgrade information through the mail. ProWrite 3.2 retails for $175. Upgrades from ProWrite 3.0 or 3.1 are $20; from 2.0 or 2.5, $60; and from 1.0 or 1.1, $75. Shipping and handling is $5 in the US, $10 for other countries.

BE YOUR OWN BOSS FOR ONLY £69.95 INC VAT

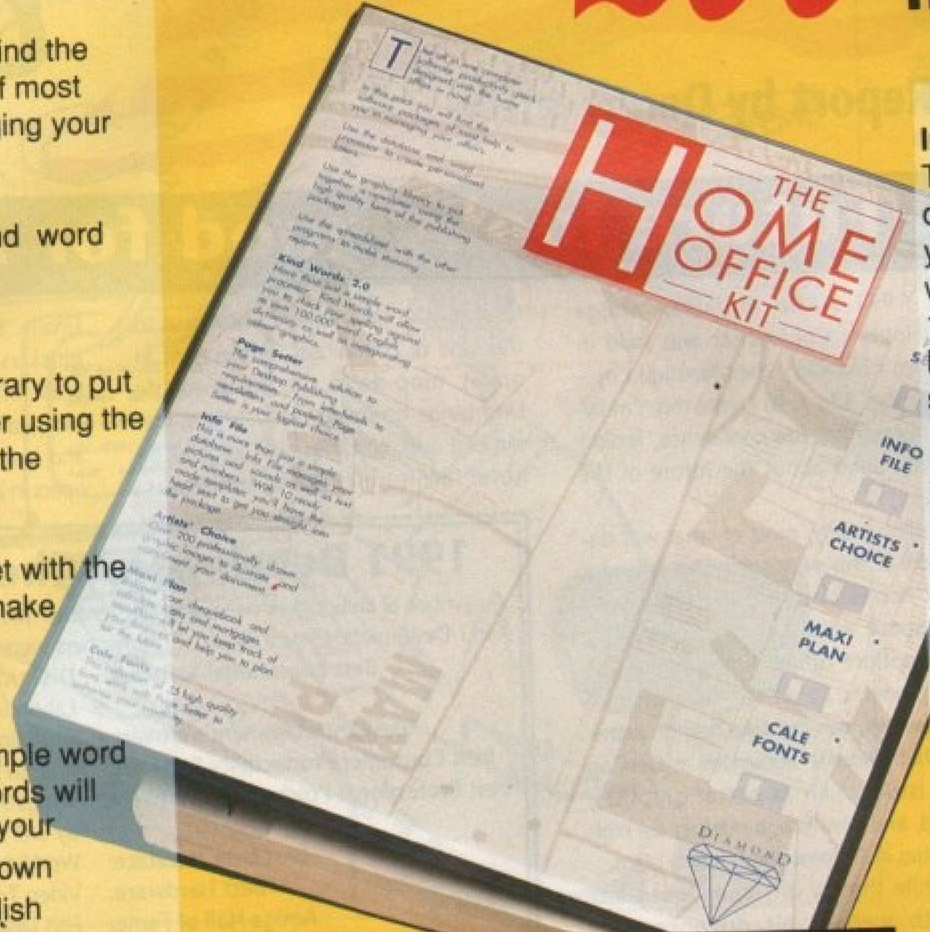
The all in one computer software productivity pack designed with the home office in mind.

In this pack you will find the software packages of most help to you in managing your affairs.

Use the database and word processor to create personalised letters.

Use the graphics library to put together a newsletter using the high quality fonts of the publishing package.

Use the spreadsheet with the other programs to make stunning reports.



Kind Words 2.0
More than just a simple word processor, Kind Words will allow you to check your spelling against its own 100,000 word English dictionary as well as incorporating colour graphics.

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The comprehensive solution to your Desktop Publishing requirements. From letterheads to newsletters and posters, Page Setter is your only logical choice.

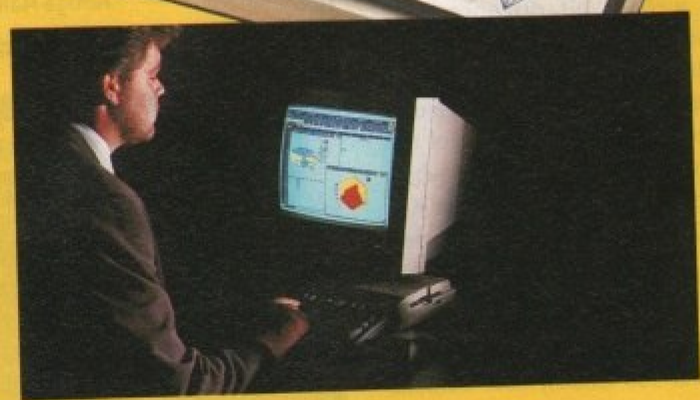
Info File
This is more than just a simple database. Info File manages your pictures and sounds as well as text and numbers. With 10 ready made templates you'll have the head start to get you straight into the package.

Artists' Choice
Over 200 professionally drawn graphic images to illustrate and compliment your document.

Maxi Plan
The leading Spreadsheet, Database, Charting and Application building programme which allows you to plan finances from personal to corporate and output them in any of 100 different chart styles.

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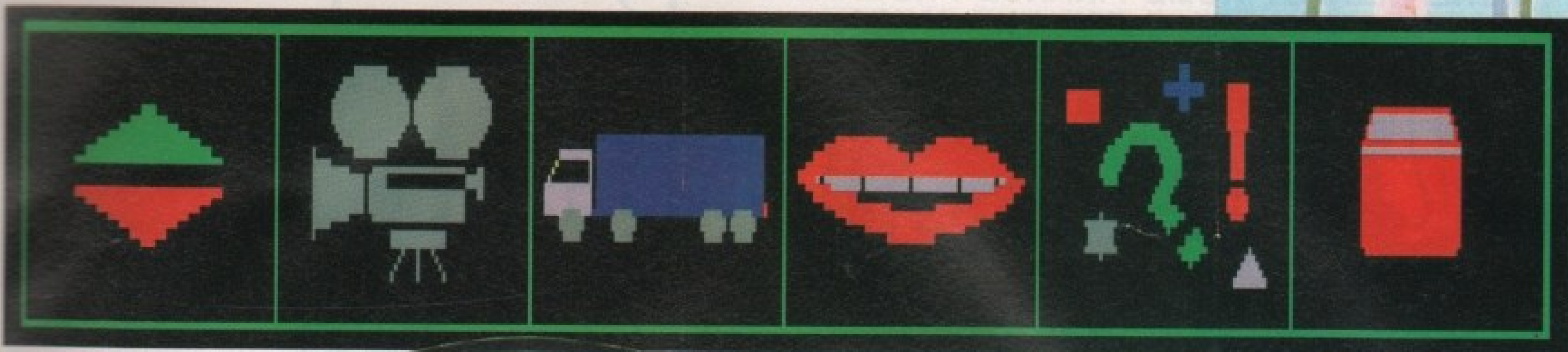
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The Chart Show spectacular

the ultimate Amiga competition

A chance to create television history, with your very own artwork appearing in millions of homes every week!

WIN A CDTV



The lucky winner will also receive this CDTV from Commodore worth over £600!

Amiga Computing in conjunction with The ITV Chart Show are offering what surely has to be the most exciting Amiga art competition in the history of the machine.

Anyone can enter and there's absolutely no need for any specialised knowledge of the machine or a programming language. All that's required is a spattering of artistic talent and an imagination to match the challenge.

The competition is based around the familiar Chart Show information panels which are produced and activated via the Amiga. At present this is done with a custom built utility which operates in a similar way to the familiar icons and windows environment of Workbench.

Simple!

You'll be glad to know that *Amiga Computing* will produce the interface and as a result all that's required from the entrants is a series of icons which suit the various information boxes which display the text, such as band history, musical influences, album details and so on.

The icon section of the competition not only gives you the chance to express your artistic talents but also offers your the opportunity to decide just what you, the viewers, want to know about you favourite artists.

Rather than just creating the icons to order, you decide just what sort of news, views, and slanderous gossip each of your idols will reveal thanks to your designer icons.

This added incentive lets you not only add your artistic talent to the program but also allows you to actively take part in the production of the show by defining the categories of information to be displayed.

Because each artist on the show is completely different it's important that a whole range of icons are available for the producer to choose from. As a result we're setting a target of twelve icons, all of which have to be completely individual and which at a glance will tell the viewers just what is lurking with the various info boxes.

Any newcomers to icon creation may well think twice before embarking on such a mammoth task, but believe me once you're in the swing it will take no time at all to produce the imagery – it's the ideas that will be the difficult bit.

So think and look for originality and you could become immortalised on the small screen, adding your very own piece to the jigsaw of modern pop culture.

Just twelve icons isn't much to ask for a chance at immortality, and the opportunity to interrogate your favourite stars every week. As a result we've added another twist to the competition in the form of a font designing challenge. This all-new font will be used to display the answers to the questions posed by your icons.

Once again this won't need any special knowledge but will require a ➤

THE BEST ST HOME FINANCE PROGRAM
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* OVER 100 BUDGETS SELECTABLE (10 ANALYSABLE)

Personal Finance Manager

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If you run a personal bank account and have a Commodore Amiga then you need "PERSONAL FINANCE MANAGER".

AS EASY TO USE AS A CALCULATOR
PFM makes full use of Amiga's Workbench interface, if you need to amend or update an entry or Standing order simply click on it. Your screen looks just like a bank statement!

STANDING ORDERS & DIRECT DEBITS EATEN ALIVE
PFM handles Credit and Debit - Monthly,Quarterly, Yearly and even complicated regular payments like 12 payments of £52.99 followed by one of £12.50, PFM will check the date and automatically insert standing orders as they become due.

BUDGET WITH EASE, AT A CLICK OF A MOUSE.
If you're the type that likes to look ahead then PFM allows you to set budgets for both expenditure and income. Over 100 budgets can be set over a year, a quarter or a month and then 10 can be displayed either in figures or as a bar graph for a given period. Expenditure for these budgets can also be shown as a pie chart so you can tell at a glance where your money's gone. PFM also allows you to display or print your budget groups selectively so you can see your expenditure quickly and easily.

BALANCING WITH YOUR BANK ACCOUNT IS NO LONGER A JUGGLING ACT
When you get your bank account statement or a balance from an autobank machine you can confirm it with PFM quickly and easily. Simply select PFM's unique "Auto Balance" option and type in the balance as given by the bank and PFM will attempt to balance and highlight entries that have not yet been processed through the bank.

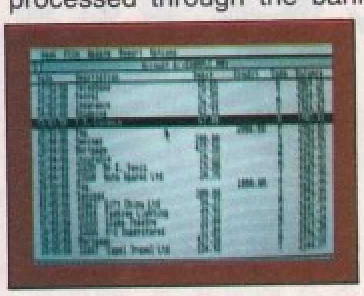


Home Finance Program By Peter Veale.
Amiga Version by Dan Lennard.

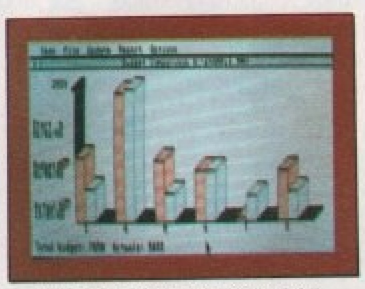
Here's what the critics say:
"PFM is one of those rare programs with which it is easy to feel comfortable from the first time you run it."
Ron Massey, ST USER

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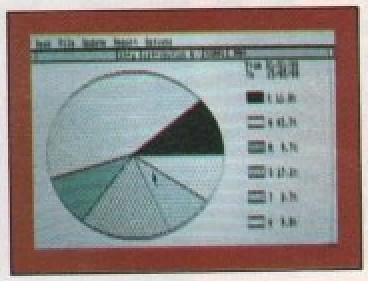
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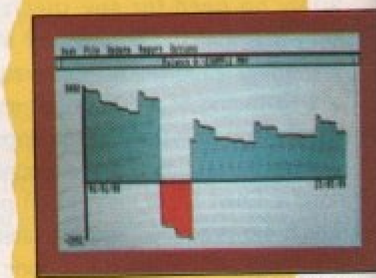
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Artistic history

In order to find out a little more about the artistic background of The Chart Show, I spoke to Louise Hadley, the woman behind the show's graphic design and one of the leading lights in the field of computer generated graphics.

As it turned out, Louis revealed that many of the familiar animations and graphic effects employed by the show are, in TV terms, rather dated.

As a result, on December 1 the show will be undergoing a complete face-lift thanks to a whole range of new techniques and equipment, some of which may well be added thanks to the Amiga, which along with other systems is beginning to revolutionise TV graphics.

The Amiga's arrival in such lofty graphic circles is down to the recent explosion of 24-bit boards and paint packages which are about to turn the TV world upside down – they are already making their mark in everything from game shows to television advertising.

In the past much of The Chart Show's artwork has been provided thanks to Quantel's Paintbox which has long been the industry standard in 24-bit art. Now that's all changed thanks to the Amiga's 24-bit abilities. Nevertheless it's still worth looking back at how things used to be in the bad old days...

Apart from Paintbox, a three dimensional system entitled Dubner has been the mainstay of most of the show's graphic output. This is the hardware responsible for the famous plane and rocket sequences and indeed the majority of special animations such as the Exclusive Release animation and many more besides.

Other systems such as Cubicomp are at the controls of the flames which blaze from the rear of the rocket. When all of the elements are complete the entire package is brought together with the aid of Paintbox.

Having mentioned all of this high power and high price hardware, it's perhaps easy to forget that some of the most interesting graphic effects needn't cost the earth. The opening roller-coaster sequence is a prime example.

This particular piece of wizardry is the product of a cameraman throwing caution to the wind and braving the worst that Alton Towers could throw at him. After the live action was captured on film, the shots were edited back in the studio and then each frame was hand painted using the Paintbox and a production technique known as rota scoping.

Apart from the new look provided by the next generation of hardware, there could be an added mystery name appearing all over the glossy graphics of the show.

An unnamed sponsor is about to lend its financial muscle to the enterprise but unfortunately, even after my best efforts as an investigative reporter, I couldn't glean any more than a "no comment" as to the identity of the mystery backer.

As a result I'm afraid we'll all have to wait to find out which of the corporate giants intend to make the best even better.

designer font that's easy to read and suits the environment of The Chart Show's all action video format.

Designing a font should be within everyone's grasp thanks to the Workbench Extras disk which every Amiga owner should have hidden away in the back of a long-forgotten disk box. If you boot the disk you'll find a utility entitled FED which funnily enough stands for Font Editor. With the aid of this handy little utility you shouldn't have any problem creating your very own designer font.

If the prospect of creating a complete character set fills you with more apprehension than any amount of icons, don't despair – it's perfectly acceptable to load a standard Amiga font and modify it to your own design, but remember – the more original the design, the more likely it is to win.

An important point is to make sure you create a full character set, not just the letters – a complete range of numerical characters is required as well as all the essential quotation marks, commas, colons and so on.

The only restriction to your calligraphic exploits is the point size of the font itself, which must be between 12 and 19 point. You can design as many fonts within this range as you like. But remember your entry is not valid if the fonts are smaller than 12 point or bigger than 19 point.

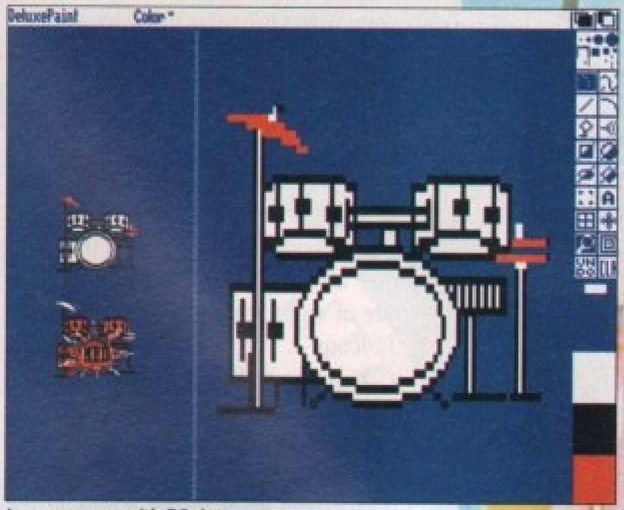
Producing the goods

Designing your icons is simplicity itself and can be done either with one of the many icon creation utilities that lurk within the public domain or by employing Dpaint to produce suitable brushes which can then be transformed into icons for use with the appropriate information boxes.

The advantage of using icon creating utilities such as IconMaster and Icon Magic is the addition of the Pattern Fill option which effectively gives you four extra paint effects to add to the original four colours of the Workbench screen.

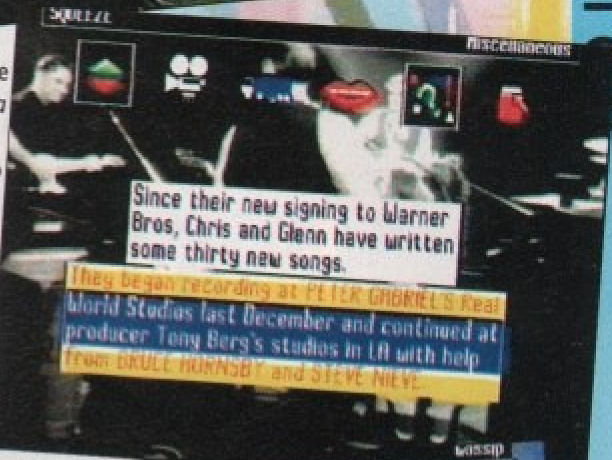
This is done by alternating colours in a fill function to give a fine mesh effect which can be applied to any filled area within an icon.

When these extra pattern effects are applied to the secondary image of a twin picture icon, its animated effect can be greatly enhanced thanks to the Amiga's familiar double clicking process. If you're unfamiliar with icon creators, any good PD library will happily supply the necessary program complete with documents which will guide you through the finer points.



Icons are easy with DPaint







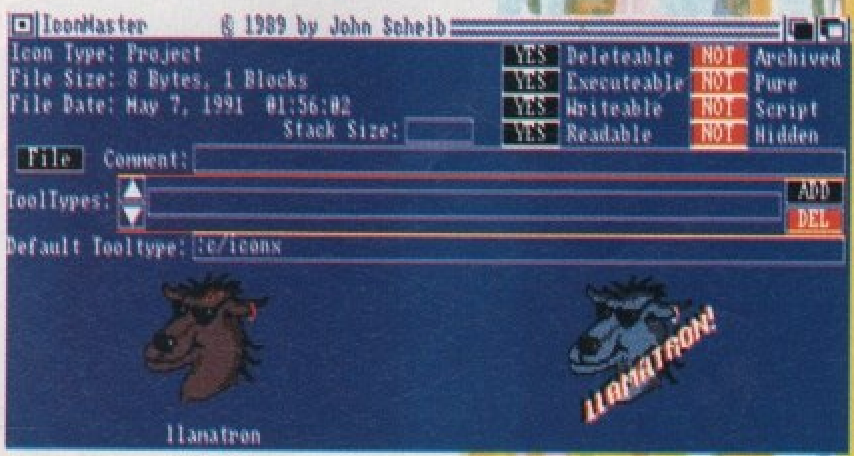
Regular readers will be glad to know that they could already have the necessary software among their coverdisk collection, the most recent example being Huge, the icon utility that was given away in the March issue of *Amiga Computing*.

Workstation owners also have a head start thanks to what has become the most popular of all icon creators, namely IconMaster, which is just one of the many utilities waiting within the disk.

If we assume that you're equipped with either a copy of Dpaint or a suitable utility, the next job is to create your icons. With an icon editor all that's required is an idea and you're off.

For Dpaint fans things are a little more complex. First you must specify the correct resolution which has to be medium-res, and in order to save confusion later on the available colours should also be set, to eight.

When the design stage of



IconMaster, on the WorkStation disk

your project finally gets under way, remember to keep your icons to reasonable proportions in relation to the screen. If you're familiar with The Chart Show, as I'm sure you are, you'll have a good idea of what's required.

If you're one of our many European and American readers or even those further afield this translates to about the size of a postage stamp for each of the 12 icons.

This size restriction applies to both the first and second stage of the icon so don't let you imagination run too wild as far as size is concerned – after all, the viewers still want to get a look at the artists, not just the icons and – of course – the juicy details they reveal.

Competition essentials

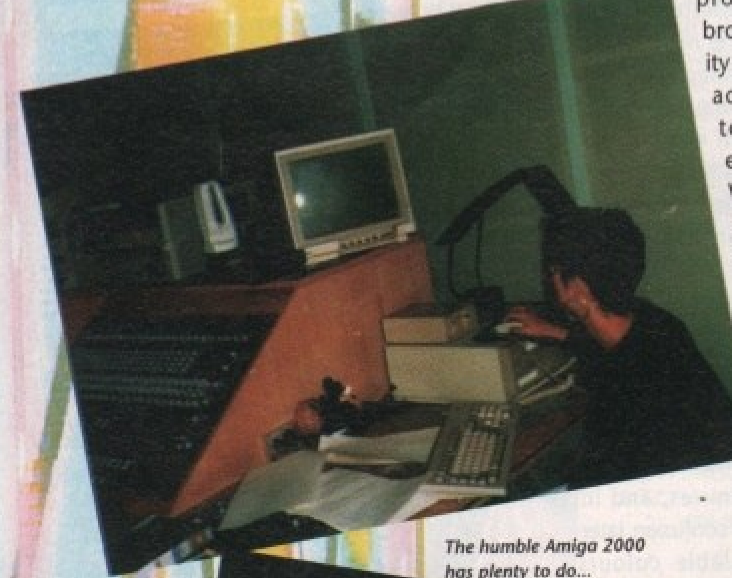
1. The first necessity for any entry are the 12 individual icons, all of which must have a double image like those used in our normal coverdisk, an example of which can be seen in the IconMaster example.
2. Each icon must be named and a short description should be added as an Ascii file on the disk which contains your entry. If you prefer to enter written details, ensure that your text is marked with any entry details.
3. Make sure your designer font is included on the disk and is labelled "Filename.font".
4. Don't forget to label the disk itself with your name, address and phone number, if you have one. This also applies to any printed material included with you entry.
5. The competition is open until November 5 so be sure to post your entries in plenty of time to meet the deadline to: Chart Show Competition, Amiga Computing, Europa House, Adlington Park, Cheshire SK10 4NP. Any submissions after this date will not be included in the competition.

Behind the screens

Eddie McKendrick visits The Chart Show

It's just gone quarter past twelve on a humid Friday afternoon as my taxi pulls up outside an anonymous, tall and otherwise uninteresting building in the heart of London's Soho.

I have arrived at what the broadcast industry has come to know as a "facilities house". This is basically a high-tech hotel where TV programme makers can rent rooms or "suites" packed full of video equipment. The sort of kit needed to edit a programme to broadcast quality is awesomely accurate and toe-curlingly expensive. When you consider that some suites cost well over £500 an hour to rent you get some idea of the scale of hardware investment we are talking about.



The humble Amiga 2000 has plenty to do...



...even with all this gear around!

There are thousands of edit suites in London's West End where programmes are finished off by production teams working to strict standards and tight deadlines.

After paying the taxi I am escorted to a small room hidden up several staircases separated by sharp corners and fire doors.

I am now in "Edit 2" of "Wiseman", where The Chart Show's producer Phil Davey is just putting the finishing touches to part one of tomorrow's show.

Go with the flow

The Chart Show is enjoyed every week by over two and a half million viewers, so it's important that every cut and link is just right. If an editor has done his job properly, you won't be aware of the joins. A good programme should flow. This is especially true of The Chart Show, where there are no presenters to take up slack or fill in gaps. Every single video is linked by graphics sequences. Some wipe, some fade, some mix but they all bind the programme together.

It takes a complete working day to get one Chart Show down on tape. This might seem a long time for around 50 minutes of television, but by most recognised standards it is positively speedy. The programme uses a whole range of technologies and techniques to achieved its high-tech look and feel. Vision mixers, character generators, and a bank of video recorders all combine to produce that unmistakable look.

We are not here to admire the monitors or flashing lights though. At the end of the control desk sits the computerised star of the show. A lone Amiga 2000 complete with external drive is responsible for the generation and display of The Chart Show's icons and information boxes.

The Chart Show uses a custom piece of software which allows an operator to input the information you seen in the dialogue boxes and then decide which icon will display it. The system is by no means as ornate as it could be. Ease of use has taken priority over features, but that's only sensible considering the fast moving environment within which it is being employed.

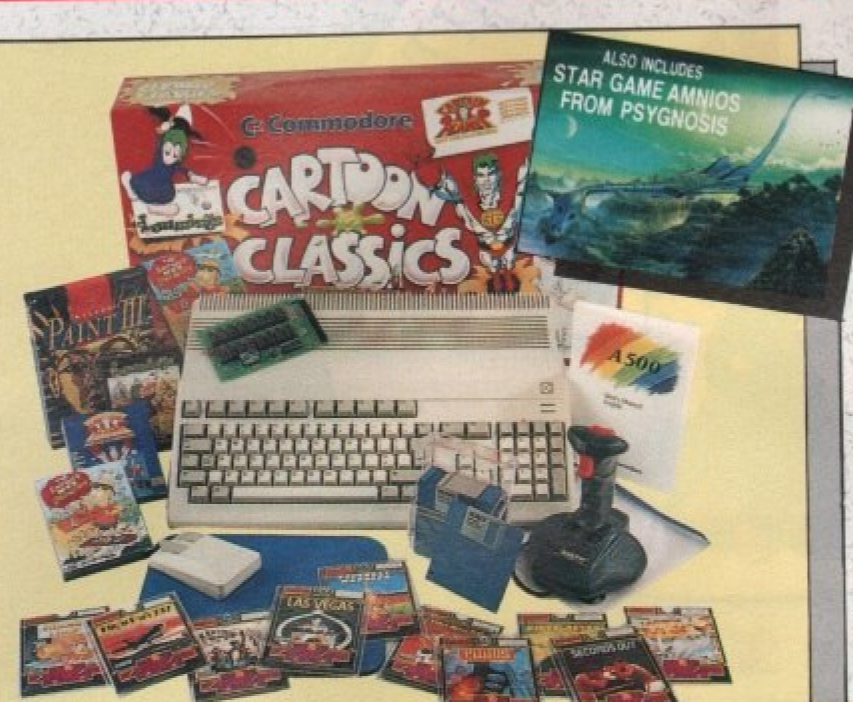
Compare the cost of the Amiga with the rest of Wiseman's kit in "Edit 2" and the humble 2000 is almost disposable. However the graphics input our trusty machine provides to The Chart Show has proven it invaluable.

Those Amiga icons have become The Chart Show's hallmark, just as the Amiga is starting to become the hallmark of quality video work with the onset of 24-bit paint systems and Amiga controlled editors. There's an exciting time ahead.

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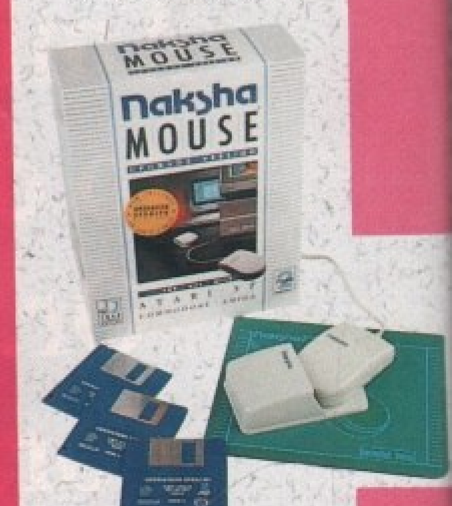
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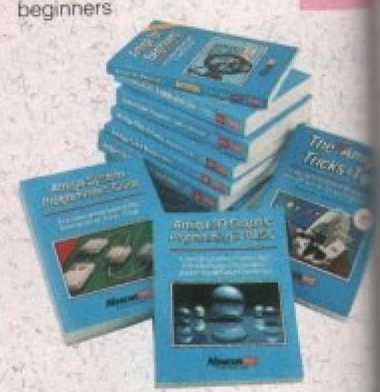
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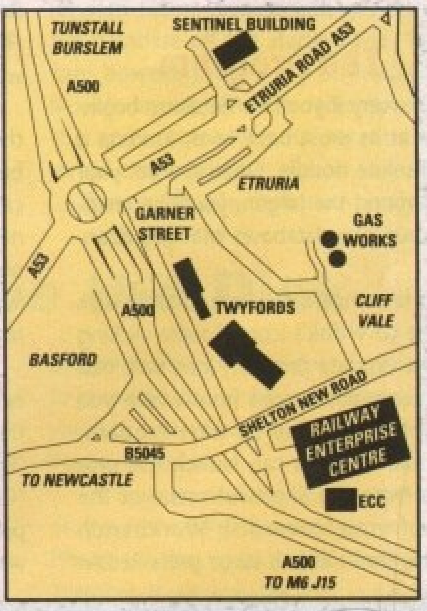
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A fully functioning version of Prodata which will even save small databases to disk? Are you dreaming?

Productive Prodata

The best coverdisk does it again with one of the most useful and productive freebies ever to find its way onto our cover. Arnor Software have been kind enough to release a demo version which actually saves small databases of up to twenty records, so you can't afford to miss this opportunity to make the most of it!

If you already own an earlier release of Prodata, skip these pages and dive straight into the program. The support material in these pages is strictly for those who've never used the program, and especially those who wouldn't know a database from a tin of sardines.

Right, first things first! Grasping the key firmly between thumb and forefinger, twist gently until the tin is open, being careful not to spill any of the vegetable oil, as this can make a real mess of your Amiga keyboard. See what I mean? How many of you were examining the disk for a key? None of you? Oh.

The program

Don't worry if you're a database beginner – at its most basic level, Prodata is an absolute doddle. Once you get your head round the jargon, you'll be creating your own databases with gay abandon.

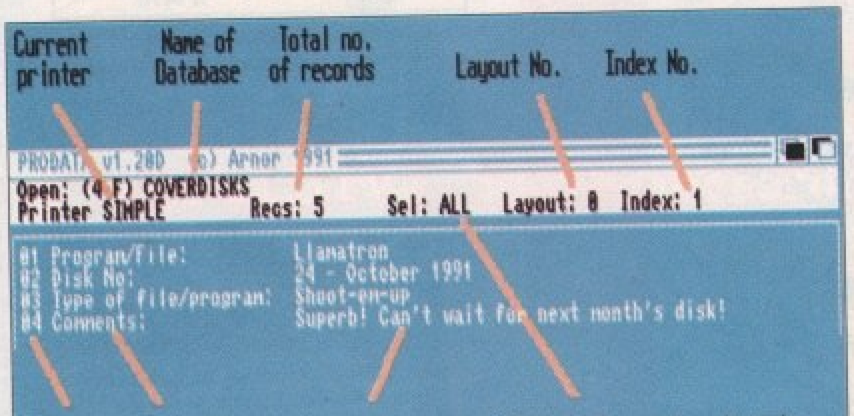
To launch the program, double click on the coverdisk's icon. Double clicking on the Prodata program icon will load an information screen from which you can press any key to start Prodata. Alternatively, you can launch the program from the ShortCut menu at the top of your coverdisk Workbench screen. Don't at this stage press Return for the list of files as the screen suggests. There aren't any on the disk, so our first job will be to create one. Be warned: There's not much free space on the disk, so to save a decent sized database you may need to copy Prodata or delete, say, the machine code drawer (always ensure you're using a backup!). Hold down the right mouse button and select Create New Database from the "File" menu on the extreme left of the menu bar.

You will now be asked to type in the name of the new database. Call it "coverdisks" and press Return. Two more questions on the general nature of the database will be put to you.

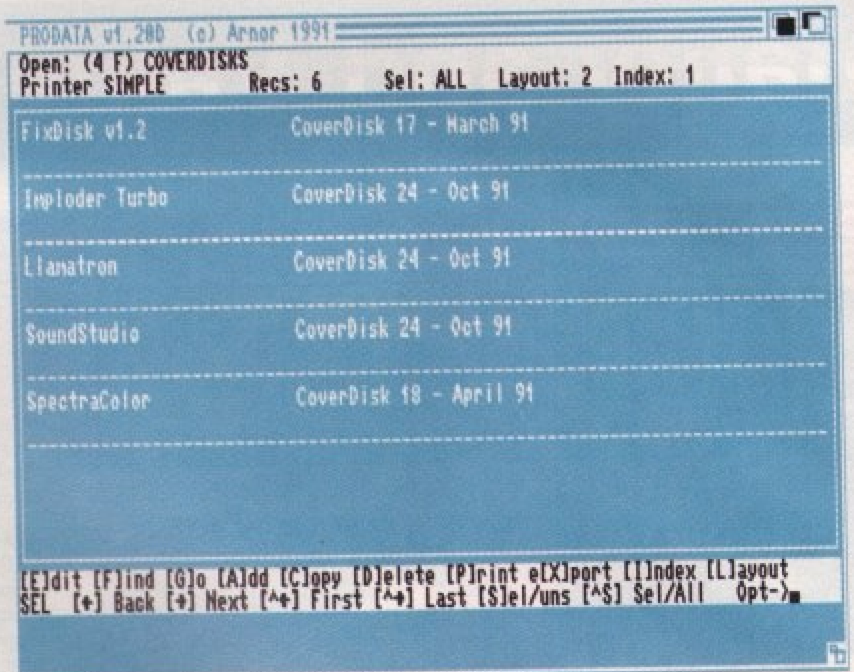
In answer to the first question, which asks if your database will allow duplicate entries in the index field, type Y. If you were to answer No to this question, the database wouldn't allow two records to have the same entry in the field it uses as the default index (field 1). Just press Return in answer to the second question. Fifteen characters is plenty for the labels we'll be giving to fields.

You should now be asked to type in the name of your first data field. The brackets to the left of the cursor indicate the field's parameters, but all you need know about them for the purposes of this tutorial is that the default field is a text string (hence the S) with a maximum length of fifty characters.

Our database will have four fields in each record, which you should name in the following order: "Program/File", "Disk No.", "Type of Program/File", and "Comments". As you type each one and press Return, you will be asked if you want your input checked to see if it is the correct type for the field. Answer N to each question until you have the four fields named, press Return after the fourth, then Esc.



Prodata's info strip can explain a great deal



The flat layout can allow you to quickly scan your records

THE

Data entry

Once the database form has been saved to disk, Prodata will ask if you want to password-protect the file. Answer in the negative for now, and press Return to go to data entry.

The demo version of Prodata will allow you to create databases with up to twenty records, so there's plenty of space to enter your favourite coverdisk programs of the past six months or so. At this stage, you should type in the relevant details for the programs you liked. As you fill each field, press Return

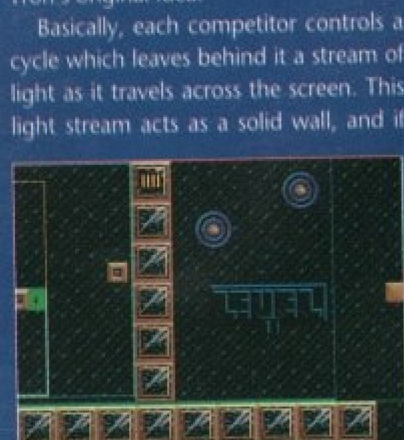
X.F.I.

Author: Tony Cheetham

Remember Tron, the sci-fi classic that used computer graphics for just about everything? After its release, a flood of games appeared based on the film's most exciting sequence, Jeff Bridges's life and death light-cycle chase, all of which gripped the game playing public through the sheer addictiveness of Tron's original idea.

Basically, each competitor controls a cycle which leaves behind it a stream of light as it travels across the screen. This light stream acts as a solid wall, and if collided with will destroy the cycle. As the game progresses, therefore, manoeuvring space becomes more and more restricted until the player has nowhere to go but into oblivion.

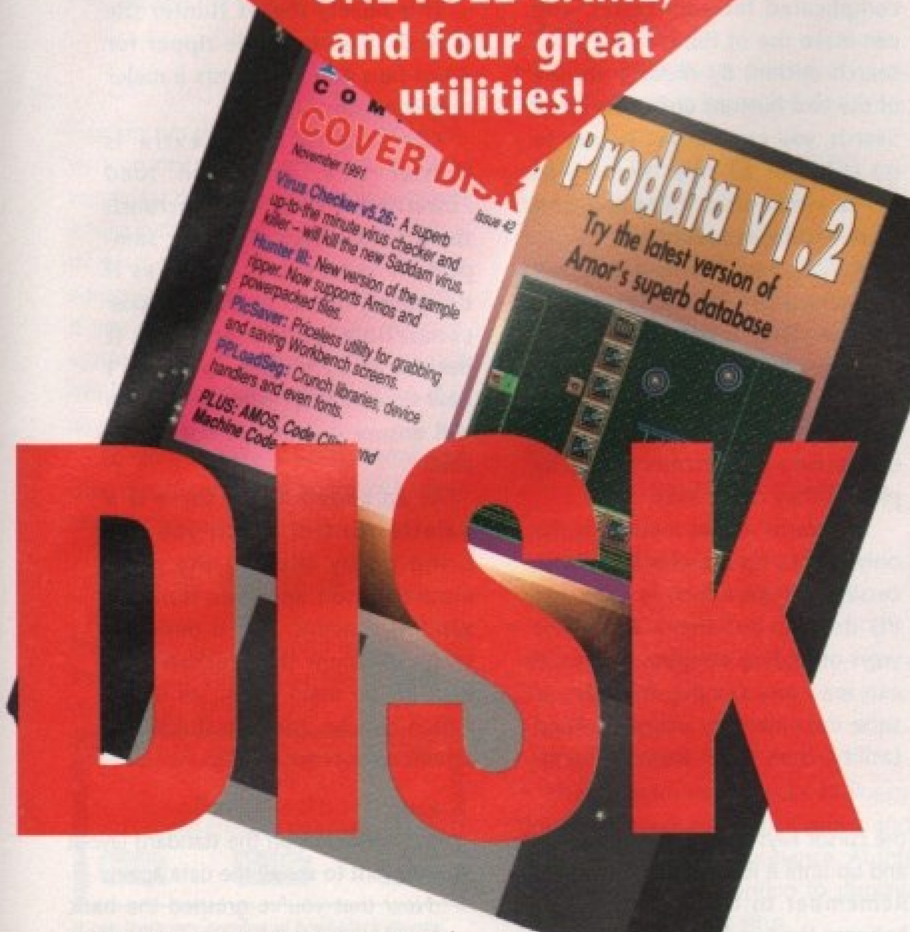
The game has both one and two player modes, so you can opt to cycle it out with a friend if the computer proves too tough for you, which I guarantee it will to begin with! There are also a few extra ingredients for the light cycle recipe, adding a touch of spice to what has been pretty regular fare over the years.


Tron is dead! Long live Tron!

Hazardous scenery

Rather than race over an empty screen, X.F.I. adds an increasing amount of walls and other scenery as the levels progress. The player soon finds the need to avoid hitting stationary objects becomes more pressing than the desire to trap an opponent. As a cop-out,

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to go to the next field, then Return and Esc to finish the record.

To add the next record, either select Add Record from the Edit menu, or press A, and continue in this way until you've filled out the database to your satisfaction. It would be best to stick to five records or so, as there is limited space on the demo disk to save your database, and this number is sufficient to demonstrate search functions and so on.

When the last record has been created, press Return and Esc to exit Create mode. You will find you can now move back and forward through your database, one record at a time, using the cursor left-right arrow keys. To jump directly to the first record, press the control (Ctrl) key at the same time as the left arrow, and to skip to the end of your database, press Ctrl with the right cursor arrow key.

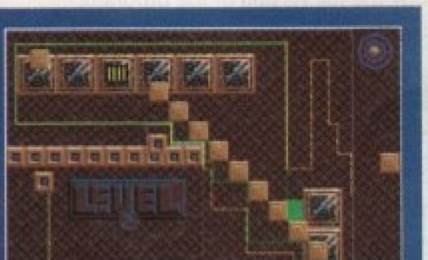
Once you're happy going back and forward through your database, it's time to carry out a Find operation. Go to the first record and select Find String from the Edit menu or type F. A cursor will appear in the strip at the bottom of the screen into which you should type the string you want to find.

Try the name of the program you entered in the second last record, and press Return. The disk will whizz as Prodata looks through your records, then the display should change to show the record containing the string you typed in. Prodata cannot search backwards, and will not continue on from the beginning of the database, so all searches should be started from record number one.

Layouts

The default Prodata layout is an uninspiring sight, designed to make it easy for the beginner to produce a straightforward list of records and get his or her database off the starting line. You can, however, make use of Prodata's flexible layout editor to radically alter the appearance of your records on screen and in print.

There is a menu dedicated purely to ➤



Avoiding death can be tricky

there are "jump gates" which, when driven into, transport you to the next level without destroying the other cycles. These can be very handy in a tight spot, but can also be fatal if you are trapped into jumping to a level whose layout is a mystery to you.

If you're feeling particularly masochistic, you can change the game speed by pressing keys 1 to 5 on the top row of the keyboard. Speed 1 is the slowest and the default value, and I would recommend you stick to it until you become a more expert cyclist. If you want to die very quickly, speed 5 is available at a key press.

If this game gives you half as much fun as it's given us, you'll be well pleased.

CanDo Fixit

If you were surprised to find the brushanims icon missing from your de-archived CanDo demo from last month's front cover, how d'you think we felt?

The American suppliers, INOVAtronics inadvertently shipped us a CanDo demo with a mistake in the archive that becomes the ExtrasDisk. If you still have the de-archived disks you can repair the fault by using the program you'll find in this month's coverdisk utilities drawer.

Make sure you have a backup of the de-archived ExtrasDisk (the second de-archived disk), then boot from the coverdisk, double click on the disk icon, then the Utilities icon, then on the FixCanDo icon. A script will be executed which will copy the missing files from the coverdisk to your ExtrasDisk, which you should then be able to make full use of.

UGA Fonts

The font included on your coverdisk is a sample from UGA's PowerFonts disk, containing ten fonts designed by Demo supremos such as Red Sector Inc. They are all presented in the form of DPaint IFFs, from which you cut each letter as a brush and paste it into your demo screen or message.

Square Font is just one of a huge number of excellent IFF fonts available for demo use, but if you find it tasty enough and want some more, you'll have to purchase a full disk from UGA or Softville PD. See the on disk documents for full details.



All you need for those PD demos

How to use the Disk

First of all, you must make a back-up copy of the coverdisk. To do this, boot up with your copy of Workbench, then double click on the Workbench disk icon, followed by the Shell or CLI icon. Now type:

DISKCOPY FROM DF0: TO DF0:

or, if you have an extra disk drive, put a blank, formatted disk in DF1: and type:

DISKCOPY FROM DF0: TO DF1:

Follow the onscreen prompts until the copying procedure has ended, then put your original disk away in a safe place. Now switch off the machine and wait for 30 seconds before rebooting with the copy. Wait until the CoverDisk17 icon appears, double click on it and away you go.

That's all you need do to make a straight copy of the entire disk. However, you may also want to to copy individual programs from your copy of the coverdisk to a separate disk. In this case ensure that you fully understand which related files need to go with it.

For example, all of the document files on the disk require that the text editor PPmore is in the current disk's C: directory. Therefore, if you copy the docs to a new disk you will also have to copy PPmore to the new C: directory before you can read them.

Some of the smaller docs will not have been crunched, so for these you need only change the tool types on the icon's info screen to reflect whichever text editor you do have on the new disk.

As a general rule, you should carefully read the documentation for any program you copy from disk to disk.

This can save a great deal of messing about and can help you avoid all those infuriating error messages!

Hunter III

Author: Neil Boffin and Martin Steven

If you bought our April issue, you'll already have seen Hunter II, which was on that month's coverdisk. We decided to include the latest version because it has a couple of features which make it a much better all-round program - we think you'll like it!

Hunter is a sample "ripper", which means it will chew out the bits of memory containing sound samples, then save them to disk for later use in your own programs or MED/Soundtracker tunes. For this to work, there must obviously be some samples available to rip, and there are several ways you can ensure this.

Because of the nature of memory chips, a warm reboot (holding down CTRL-Amiga-Amiga) will not flush their contents. This means that if you play a PD demo or a game, then carry out a warm reboot, the samples used in the game's or demo's music will usually be preserved in memory.



Hunter's handy palette requester

Hunter can take advantage of the situation because it enables you to "playback" the contents of your computer's chip memory – where all samples are stored – until from among the hissing, crackling noises you hear a sample you'd like to keep. Once the sample has been found, you can isolate it using Hunter's Length and Start buttons until you have determined its exact location, then save it to disk.

The Start button determines where in memory the playback will begin, and the length button sets the amount of memory to be played through. By the judicious juggling of these two settings, it should be possible to home in on any sample present in your machine's memory, as these will stand out plain and clear from the background garbage that is the rest of your chip ram's contents.

If this process seems a little over complicated for your tastes, you can make use of Hunter's very fast search option. By clicking on one of the two buttons under the word Search, you can instruct Hunter to go through all chip memory in search either of an IFF sample or a Soundtracker-type module.

Neither is perfect, and both will often entirely miss a sample or module. They are both very fast, however, and it's a good idea to use them first, then resort to the longer and more tedious process of checking your memory piece by piece if they don't work.

The warm reboot method is the only way to rip samples from inaccessible software such as games or PD demos, but there are other ways of finding samples. Hunter III can load any sample, module, or tune into memory using its Load facility, then trawl through memory in the same way as before.

Hunter III offers several improvements over Hunter II. The most useful from an Amos user's point of view is the facility to load Amos sample banks for examination, or to save samples as an Amos bank ready for use in Amos programs.

This facility makes Hunter the only choice of sample ripper for Amos fans and represents a major upgrade from v2.

The second major extra is Hunter III's ability to load PowerPacker data files, uncrunch them, and search them for samples. It seems these days as if everything has to be powerpacker compatible, so universal has it become as a cruncher, so Hunter's new PowerPacker-friendly version will ensure it isn't left out in the cold.

As an added extra, there is a palette control which you can bring up by clicking the right mouse button any time Hunter's window is active. This is designed to complement the Workbench 2 look of the main panel, an effect which can be unsuccessful if the screen colours are wrong.

➤ layouts, but for the moment you need only select Create New Layout, the last in the list. When asked, call the layout "flat", and press Return to go to the layout editor.

You must now define the layout's parameters. Most of these don't concern us as the flat layout will be a fairly simple example.

Type in the values shown in the box on this page to create a layout with records that appear as thin strips one above the other.

Since we allow 999 records per page, you can fit as many of your records on one screen as possible, making this sort of layout ideal for quickly glancing through the database.

When you've typed in all of the parameters, press Esc. The screen will change to a graphical representation of the layout, and field one will already be onscreen ready to be positioned. It needn't be moved as it's where we want it, so press F to call up a list of fields, and double click on field two.

The field will appear as a line of dashes on the editor screen, and will be highlighted to show that it is the currently selected field. We want to move it to the right of field one on the same line, so hold down the Shift key and use the cursor keys to move the field across and up until it is in the correct position. Remember to leave a blank space between the two fields.

If you now press Esc, the layout will be saved to disk and your records will appear onscreen in their new form. Don't worry that only two fields are visible – the other two still exist. To swap layouts, choose "Select Layout" from the layout menu or press L. A list of the available layouts will appear and you can double click on the standard layout if you want to see all the data again.

Now that you've grasped the basic principles of layout creation, you can go on to create address labels, book record cards – the list is endless. To master the full power of Prodata, however, you'll need more advice than we can supply in these two pages, and for that the only source is the Prodata manual, available from Arnor when you buy the full version of the program!

PPLoadSeg

Author: Nico Francois

PPLoadSeg is the answer to a disk compiler's dreams. Previously, using PowerPacker, it has been possible to crunch data files, such as documents, and executable program files so that we have been able to bring you much *more* than the standard 880K of programs on our coverdisks.

There is a group of files, however, which we've never been able to crunch. Workbench's libraries, fonts, device handlers, and so on have always had to go on the disk in their uncrunched states and have thus unavoidably used up a lot of space we could have used to bring you even more programs.

With the latest addition to the PowerPacker stable, you can crunch system files to your heart's content, then use them as normal as long as you include the PPLoadSeg command early on in your startup sequence. It then acts as a rom "patch", replacing the Amiga's LoadSeg routine with its own, which recognises PowerPacked system files.

To use PPLoadSeg on any disk, simply copy it from our coverdisk to the C: directory of the target disk and alter its startup sequence to include the line PPLOADSEG. It is best if this line is one of the first in the startup sequence as PPLoadSeg should be activated before any system files are accessed.

For the latest version of PowerPacker Professional, contact Softville PD, the UK distributor for UGA Software, on 0705 266509.

PicSaver

Author: Preben Nielsen

PicSaver is a utility for saving screens or parts of screens as IFF files for later use in DPaint or any other Amiga art package. For example, all the Virus Checker windows grabbed for use in this month's disk pages were grabbed using PicSaver.

To run PicSaver, either click on its icon, or run it from CLI by typing

```
PicSaver <RETURN>
```

The program will automatically detach itself from the CLI to run in the background.

Three way split

In use, PicSaver offers three ways to save screens or parts of screens. All three involve holding down the left Alt-Shift-Ctrl keys at the same time. To save a full screen, hold down Alt-Shift-Ctrl and the S key and the presently active screen will be saved once you've typed its name and save path into the file requester.

To save a window on its own, ensure that the desired window is active by clicking in it, then hold down Alt-Shift-Ctrl-W to bring up another save requester.

The third method involves holding down Alt-Shift-Ctrl with no other keys. A cross-hair will then appear on your mouse arrow, which you can use to cut out a portion of the screen in exactly the same way you'd cut out a brush in DPaint. Click with the left mouse button and drag the cross-hairs until you've outlined the target area, then release the button and type your path and filename into the requester as normal.

To remove PicSaver, either run it again, or press Alt-Shift-Ctrl-Esc.

Virus Checker

Author: John Veldthuis

The recent outbreak of the Saddam file virus, a particularly nasty piece of work, prompted us to cast around for a good general purpose killer capable of dealing with the latest menaces. Virus Checker was the obvious choice.

Installation

You can run the program by clicking on its icon once Workbench has loaded, but by far the most efficient way to use it is to include it in the startup sequence of your hard drive or the disk from which you normally boot your system. If you continually reboot with different system disks, it's a good idea to put Virus Checker on its own disk and use it after each reboot.

To do this, take a blank, formatted disk, install a standard boot block using the command:

```
INSTALL DRIVE DF0: <RETURN>
```

then copy the program across to it from the coverdisk. You can do this by dragging the icons across on



It can learn any number of boot block viruses

Workbench, or by using the COPY command.

If you have two drives, boot from the coverdisk and place the blank disk in your external drive. Next, click in the CLI window left open at the bottom of the coverdisk main screen and type:

```
COPY UTILITIES/VIRUS_CHECKER TO DF1: ALL
<RETURN>
```

The entire Virus Checker directory will be copied to the extra drive, and you should be able to run it at any time by typing:

```
DF1:VIRUS_CHECKER <RETURN>
```

If you have a single drive, your best bet would be to load Virus Checker into ram at the start of the day. If using a word-processor, for example, you could then check each data disk before saving precious documents to it. To copy the program to another disk using a single drive, activate the CLI window on the coverdisk's Workbench screen, and type:

```
COPY COPY TO RAM: <RETURN>
COPY CD TO RAM: <RETURN>
COPY UTILITIES/VIRUS_CHECKER TO RAM: ALL
<RETURN>
CD RAM: <RETURN>
```

Now insert the blank disk onto which Virus Checker is to be copied, and type:

```
COPY RAM:#? TO DF0: <RETURN>
```

If in future you need to use the program to check a number of disks, or would just like it close at hand, rename the disk as VIRUSCHECKER (no spaces), and type:

```
COPY VIRUSCHECKER:#? TO RAM: <RETURN>
```

You can now run Virus Checker by typing:

```
RAM:VIRUS_CHECKER <RETURN>
```

at any time.

Using Virus Checker

When activated, Virus Checker first checks memory for known viruses or suspicious vectors, and removes or disables those found.

The program next checks all floppy drives for known boot block viruses and alerts the user to their presence. At this stage, you have the option to display, ignore, or remove the virus.

Displaying the boot block will give



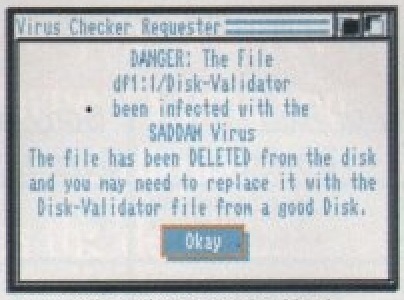
Kill that virus!

you a chance to gaze at a load of machine code which sometimes contains Ascii text from the coders of the virus. This can be of help of you're trying to decide whether a dodgy boot block is a virus or simply a custom block.

If the boot code displayed by Virus Checker includes a stupid message from the dork who wrote the virus, you can rest assured of its identity. Otherwise, the display function is just a handy aid to nosy people like you and me. If the boot block is a new or unknown factor, a fourth option appears enabling a "learning" function. This adds the boot block to Virus Checker's "brain file", a sort of ID parade for boot blocks. Once a boot block is added to the brain file, Virus Checker will cease to alert you to its presence, saving loads of hassle if you have a lot of PD disks with message-style boot blocks.

Digital Scuds

As a last ditch defence against the Saddam virus, John Veldthuis has supplied the computer equivalent of the



Virus Checker will take care of Saddam!



A scan for Xeno can save a lot of heartache

Patriot missile system in the shape of his FixSaddam program. The program is designed to be used on disks already infected by Saddam and, when run, attempts to repair any damage inflicted by the virus.

There is no cure for disks which have been completely kippered by Saddam, but the virus will alter some blocks when it first infects a disk, and it is this damage that FixSaddam is intended to repair. To check a disk, put it in one of your drives, say DF0:, and type:

```
FixSaddam DF0: <RETURN>
```

The program will then cycle through all tracks on the disk, and will inform you when it finds Saddamised blocks.

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SOLID as a rock

Does your telly or monitor flicker? Do your eyes update your brain 50 times a second? Maybe it's time you looked at flicker-free displays. Jolyon Ralph has the details...

If you have ever used an Amiga application that opens a high resolution or interlace screen, you will have noticed the rather awful interlace flicker that afflicts these screen modes. If you use Desktop publishing or Computer Aided Design (CAD) you will probably find that high resolution screens are essential, and you have to find a way to reduce the flicker.

There are several ways in which you can reduce the flicker on a television or standard monitor, such as the Philips CM8833 or the Commodore 1084. You can reduce the brightness level on the monitor, change the colours, buy an anti–glare screen filter or even wear sun-glasses. None of these methods will completely remove the flicker – they will just cut the levels down.

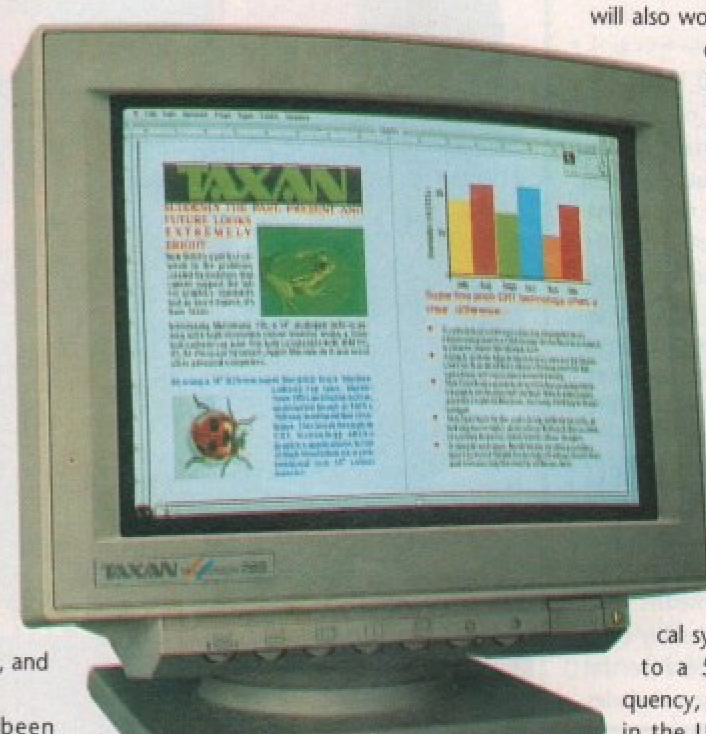
De-interlacers

If you have decided once and for all that the flicker must go no matter what the cost is, then you have only one option – buy a multisync monitor. Depending on what machine you are using you will probably need to buy a de–interlacer card as well. This converts the video output from the Amiga into a stable non–interlaced output that the multisync can display.

If you own an Amiga 500 there is only one de–interlacer currently available for you – the ICD Flicker Free Video board. This board plugs inside your Amiga 500 invalidating your warranty, and will probably not fit if you have accelerators or other internal hardware added. Once installed, a ribbon cable with a 9–pin monitor connector hangs out of the back of your machine. To this you can attach a multisync monitor.

If you want to play games, or work in low or medium resolution you will find that fast moving objects, like your mouse pointer, or anything that moves in games, will blur to the point that a lot of games are totally unplayable. The only solution to this is to use a monitor connected to the standard Amiga output for these modes, either your original television or medium–resolution monitor, or your new multisync with an adaptor cable.

> *A 9-pin monitor connector hangs out of the back of your machine*



Video slot

The Amiga 1500 and 2000 provide a special video slot which allows easy installation of a de–interlacer card. There are two such cards available – the original Microway Flicker Fixer, a tried and tested design, and the Commodore A2320 card.

The Microway card has been around for a couple of years now and was, until they released their own card, strongly recommended by Commodore. It fits neatly into the video slot with a 9–pin monitor output. Most modern multisyncs have 15–pin outputs rather than 9–pin, so you may need an adaptor to plug your monitor in.

Like the ICD board, it does not handle low or medium resolution very well, leaving you to either run two monitors or wire up a cable allowing you to switch between the Flicker Fixer and the standard 23–way output. The Microway card, unlike the ICD and Commodore card, is not compatible with the new ECS screen modes.

The Commodore A2320 card uses the same de–interlace circuitry that is found in the Amiga 3000 which unlike the Microway and the ICD products, is intelligent. It will de–interlace all high resolution and interlace screens, but will double–scan low and medium resolutions screens.

This means that not only is the image free from blurring, but the thin black scanlines found on ordinary monitors have been removed. The result is a clean and sharp image, although it does make low resolution in particular seem rather blocky. It is certainly better than having to put up with two monitors or a switch box.

Switched off

If you don't like the blocky low res or for some bizarre reason you want to return to the flickery interlace, there is a disable switch on the card which will give you a standard Amiga image.

The Amiga 3000 does not need a de–interlacer, for it has an excellent de–interlacer built in to the machine. Any standard multisync monitor, including those listed below, will give a stable image in hi res.

There are a wide variety of multisync and similar monitors available which will work with the Amiga. Some of them will only work with the flicker–fixer installed and active, others will also work with the standard Amiga output, or with the Commodore A2320 card in fall back mode. For PAL machines the monitor must be capable of 50Hz vertical frequency operation, which unfortunately rules out most cheap VGA monitors.

Monitors

When looking for a monitor there are a few things which you must take into consideration.

Firstly, it must be capable of a 50Hz vertical sync frequency – as opposed to a 50Hz power supply frequency, which it must handle if sold in the UK. Otherwise your Amiga picture will continually roll around the screen with no way of stopping it.

Some monitors are capable of a 50Hz display despite it not being mentioned in the technical specifications. Also, if you want to use it with the standard Amiga output – either direct from the Amiga's 23-pin video port or by switching off the A2320 card – the monitor must be capable of a 15KHz horizontal sync frequency. Most larger monitors cannot handle this.

The second thing to check for is the screen quality. This is, of course, a complex thing to measure. Watch for the dot pitch – this is the distance between each group of red, green and blue dots ➤

What is flicker?

Interlace flicker is unavoidable when using the Amiga with a television or a cheap colour monitor. This is because a single high–resolution screen cannot be fully displayed in a single video frame (1/50 second). To output the full display requires two passes. The first frame displays all the odd–numbered lines, 1..3..5..7..9.. and so on, and the second frame draws in the even–numbered lines to fill the gaps. However, because of the time delay in drawing the second screen, the phosphorous screen has already started to fade, and it is this difference in brightness levels between the odd frame and the even frame that causes the flicker.



What is a multisync?

Televisions and normal monitors operate on a fixed frequency. The frequency is described in two components: the vertical frequency, which is the number of frames displayed per second, and the horizontal frequency, which is the number of horizontal lines displayed per second.

Standard PAL televisions have a vertical frequency of 50Hz and a horizontal frequency of around 15.5KHz. The Amiga output is identical to this, to allow the Amiga to display all video modes on the same monitor – unlike the Atari ST. With these fixed values, the number of lines that can be displayed in one frame is limited to around 300.

A multisync monitor can accept a wide range of vertical and horizontal frequencies, typically 50Hz to 70Hz vertical and 15.5KHz to 35KHz horizontal.

A quick calculation reveals that by doubling the standard Amiga horizontal frequency, we can get all 512 lines of our hi-res display in one frame, resulting in no flicker. De-interlacer cards work by providing an output at these frequencies that the multisync can display.

➤ on the screen surface. The lower the dot pitch, the higher the screen quality. This can range from 0.39mm on bad monitors to 0.21mm on the most expensive screens. Some screens have anti-glare coatings to cut back reflected light, others have low radiation screens which are said to be safer to use, particularly for pregnant women.

Taxan sell a wide range of monitors that are compatible with the Amiga, from 14in models up to 20in monsters.

Options

The Taxan Multivision 770 Plus LR is probably the most popular of these. It works fine with both standard Amiga output and de-interlaced output. It is a 14in monitor with an excellent anti-glare tube. The dot pitch is 0.31mm, which is average for these monitors, but not excellent. This monitor has the distinction of being one of the first low-radiation colour monitors around which are so safe that even the Swedes use them. Apparently.

Less healthy, but with a bigger screen, is the Taxan Multivision 970 with its 20" display and 0.31mm dot pitch. This monitor has a medium-persistence display, which means that interlace is cut down considerably even without a de-interlacer, because the phosphor coating on the screen fades more slowly than normal screens.

If you want the best in quality screens, the Taxan Multivision 795 provides an amazing 0.26mm dot pitch on a 14" screen. Unlike the other two Taxan monitors mentioned here, it does not support standard Amiga 15.5KHz signals, so it will not work without a de-interlacer, or if it is turned off.

Monitors which are so safe that even the Swedes use them

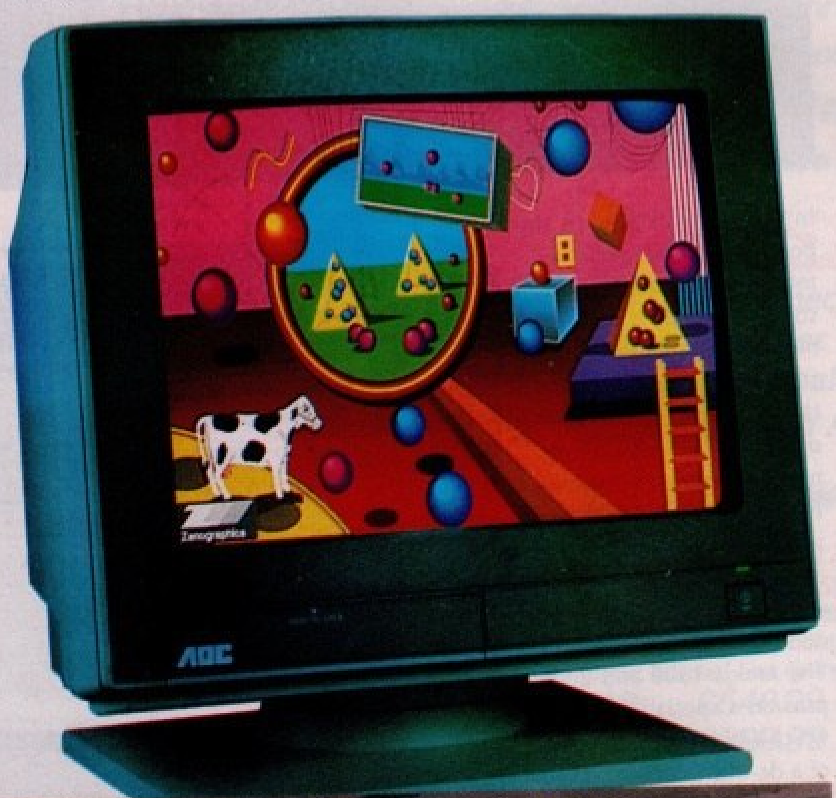
Other popular monitors are the AOC range. There are two very similar models being sold, the CM-325 and the CM-326. The CM-325 is a Super-VGA monitor rather than a multisync. The difference with Super-VGA monitors is that rather than working over a wide band of frequencies, they can automatically switch between a few preset frequencies.

These monitors are often considerably cheaper than multisyncs, although not all Super-VGA displays will work with de-interlacers, and they will not work with the new ECS display modes or with the de-interlacer turned off.

The CM-326 is a true multisync and will handle all Amiga displays including the ECS chipset. Both monitors have a good 0.28mm dot pitch and a 14" tube. The CM-326 comes with both 9-pin and 15-pin plugs to fit easily into any of the three boards available, although you will need to use an adaptor cable if you want to run the monitor with the standard 23-pin output.

My personal favourite for price and features – although I can't afford one at the moment – is the Panasonic TX-1703MA. It has a Sony Trinitron 17" FST screen and a 0.28mm dot pitch. Although it cannot cope with standard de-interlaced signals, it can cope with the ECS productivity modes.

The screen display is simply excellent – it is big enough to allow you to use a large display with small fonts and still read them, but not so big that you hurt your neck constantly turning your head to view both sides of it. It also has two sets of inputs, which is useful if you have two or more computers.



Flexible

If you have more than one computer, multisync monitors can prove a worthwhile investment. One monitor can work not only on the Amiga, but on PC's (with VGA, Super-VGA or above graphics), Apple Macintosh II, Atari ST and almost every other type of computer you can think of.

If you have an Amiga bridgeboard you can forget the crummy slow CGA graphics – add a VGA or Super-VGA board into your system and plug your multisync directly into the bridgeboard for the best possible PC graphics. Monitors with two or more sets of inputs will allow you to wire up the bridgeboard and your Amiga directly to the monitor and switch between them giving you the best combination of Amiga and PC graphics you can have in one

More information

Display enhancers

Make	Model	Price
Commodore	A2320	£249
Power Computing	ICD Flicker Free Video	£250
Microway	Microway Flicker Fixer	£125

Monitors

Make	Model	Price
Taxan	Multivision 770 Plus LR	£629.00
Taxan	Multivision 795	£699.00
Taxan	Multivision 979	£1,999
AOC Monitors	CM-325	£300-£400
	CM-326	£300-£400
Panasonic	TX-1703MA	£1,399.

All of these monitors are available from most serious Amiga suppliers, including Almathera, on 081-683 6418. All prices include VAT.

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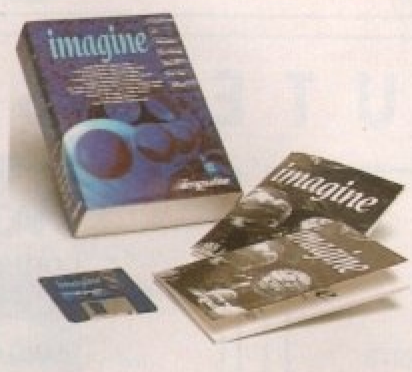
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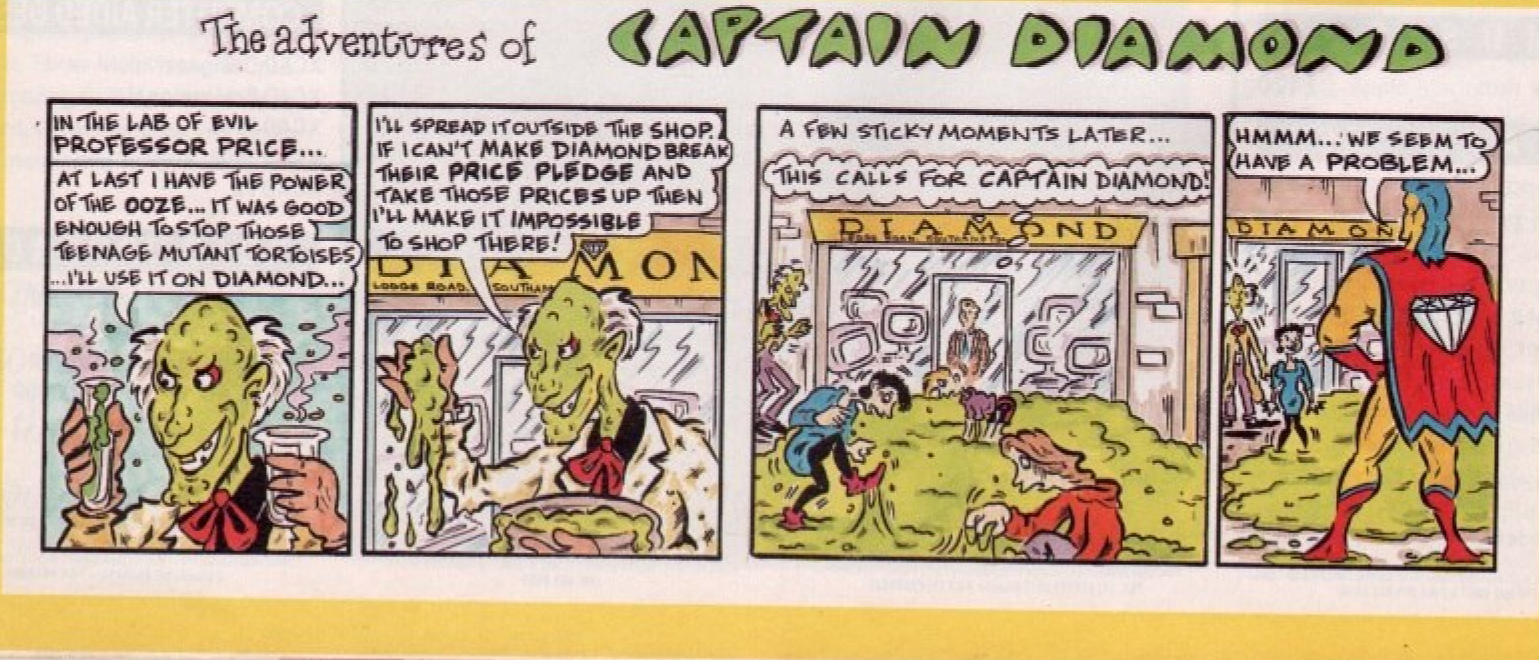
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AMIGA 3000
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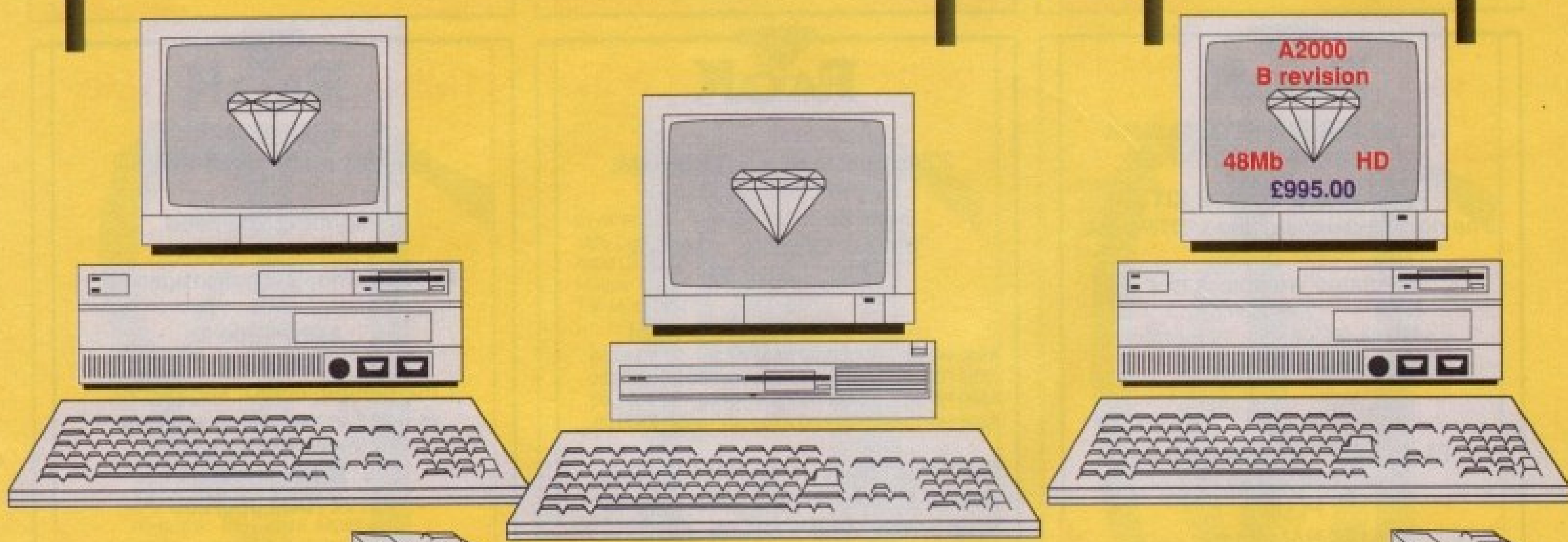
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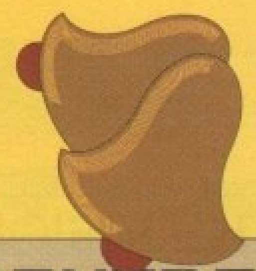
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Video making movies

Paul Austin takes the controls of perhaps the most flexible DTV editing system around.

The Amiga is already the primary machine in the world of desktop video, with countless titlers and all manner of Amiga generated images finding their way in to both amateur and commercial productions.

However, up until now the Amiga's role has been merely that of a special effects engine, only called upon to add finishing touches such as animations, titles and of course glamour where live action is concerned.

Now fortunately for both the machine and it's videophile owners, that's all about to change and the once humble extension to the average video workstation may soon become its heart.

VideoPilot is one of three systems presently leading the field in Amiga controlled editing, and over the next few months we plan to explore all the available options and give the definitive guide to the Amiga in the movies.

Obvious advantages

Anyone who's tried video editing the old fashioned way won't waste any time extolling the virtues of computer controlled editing. The endless piles of scrap paper, worn out stopwatches and an expression that only being up till four in the morning can provide, are sure signs of the video editing old guard.

The basic principle of any editing system is to help keep track of hundreds of scenes spread throughout your library of unedited tapes, to arrange them as required, then to accurately assemble the desired shots in a user defined order, all with squeaky clean edits making seamless connections.

To achieve this, the various master tapes need to be either timecoded or controlled via their tape counters. The timecode option is by far the most precise of the two and boasts an accuracy of +/- one frame, which is as good as any system can offer.

The tape counter alternative isn't anything like as accurate but is still capable of between 5 and 10 frame precision over a period of around 15 minutes. If you're working with longer tapes, the software can divide the footage up in order to keep timing within tolerable limits.

What's in the box?

Like many dedicated Amiga applications, VideoPilot is a combination of both hardware and software – the hardware element of the equation being a multiple input timecode read/write unit that synchronises three source players which then write to a fourth mastering machine.

The various machines can be a mixture of VCR's and camcorders, all of which are controlled by either infra red or hardwire remote control.

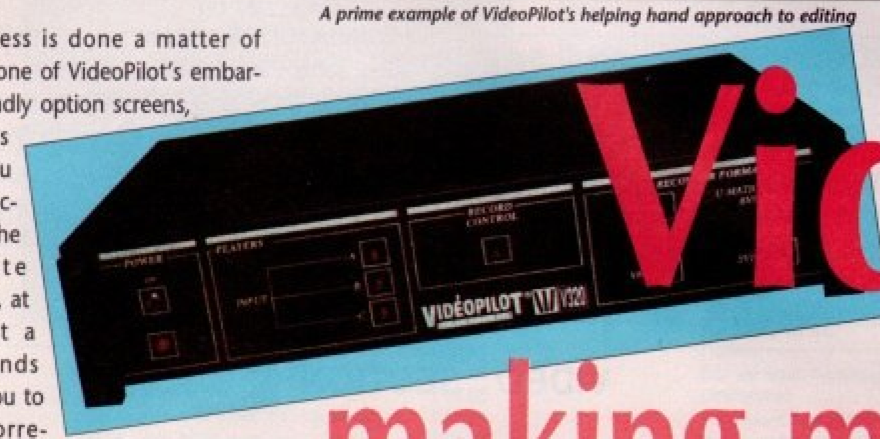
Along with the black box, you receive a pair of infra red rodents which connect to the VideoPilot and issue commands to the players by taking over the role previously undertaken by their own remotes. Also included is the control software, connections and of course the ever-present manual.

The learning process

Perhaps VideoPilot's greatest strength is its versatility and willingness to learn how to control the ever-changing variety of available VCR's and camcorders.

It's the afore–mentioned infra red rodents which provide this power, due to their ability to be taught how to control unfamiliar machines. This is done by aiming the VCR's own infra red controllers at VideoPilot's surrogate units which then learn the required commands to operate the transport on the machine.

This process is done a matter of moments in one of VideoPilot's embarrassingly friendly option screens, which in this case asks you to press a function key for the appropriate video control, at which point a bleep sounds prompting you to hit the corresponding button on the VCR's own remote.

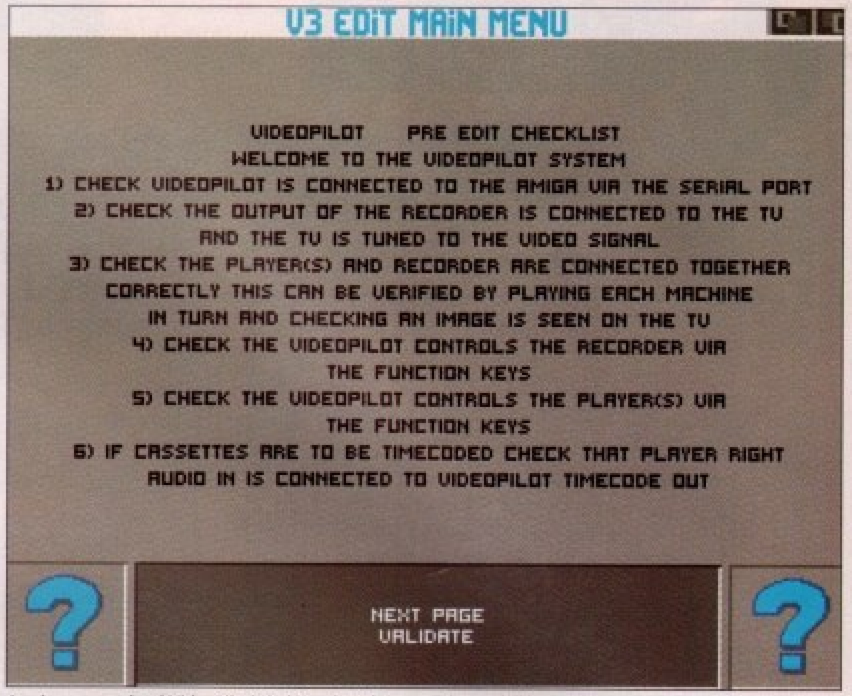


After all the commands are complete, the Amiga assumes full control of the VCR from the comfort of the function keys. Amazing...

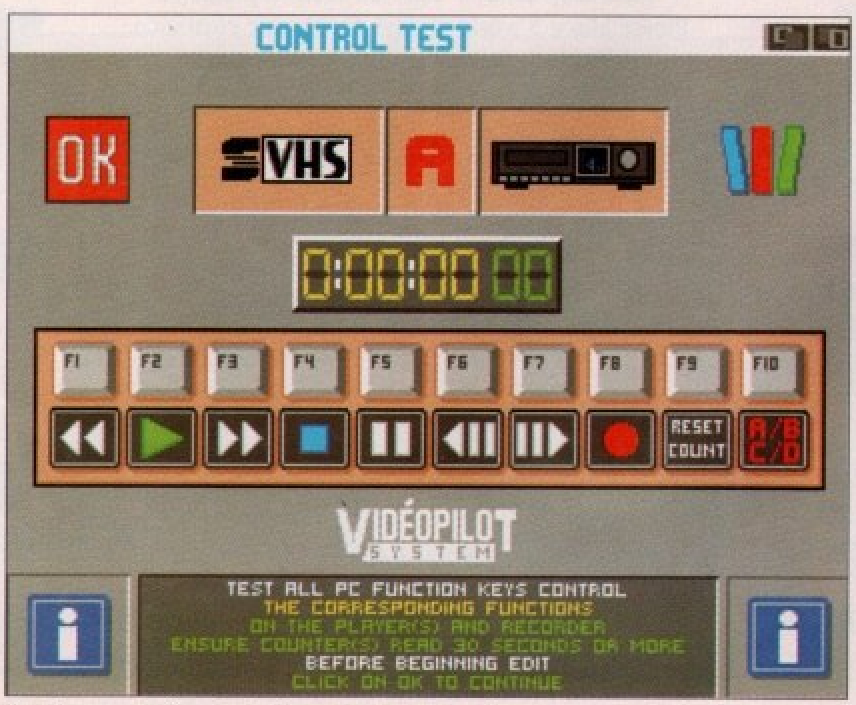
Having explained this impressive talent it's perhaps unlikely that you'll need to try it for yourself – there are a multitude of pre–defined configurations already programmed into the software and even if you do need to define commands they can be stored on disk and loaded with the rest when necessary.

Second only to VideoPilot's flexibility is its easy of use, which for a program and hardware combination of such complexity is a rare thing indeed. All the various screens lead you by the hand with large icons and wiring configurations all appearing onscreen.

This makes the correct connections in the real world as simple as possible.



A prime example of VideoPilot's helping hand approach to editing



Your chance to try the controls of your video, via the function keys

The entire process of configuring and operating the system is done with the rodent, with the only exception being the operation of the video controls which, as mentioned earlier, is done with the function keys.

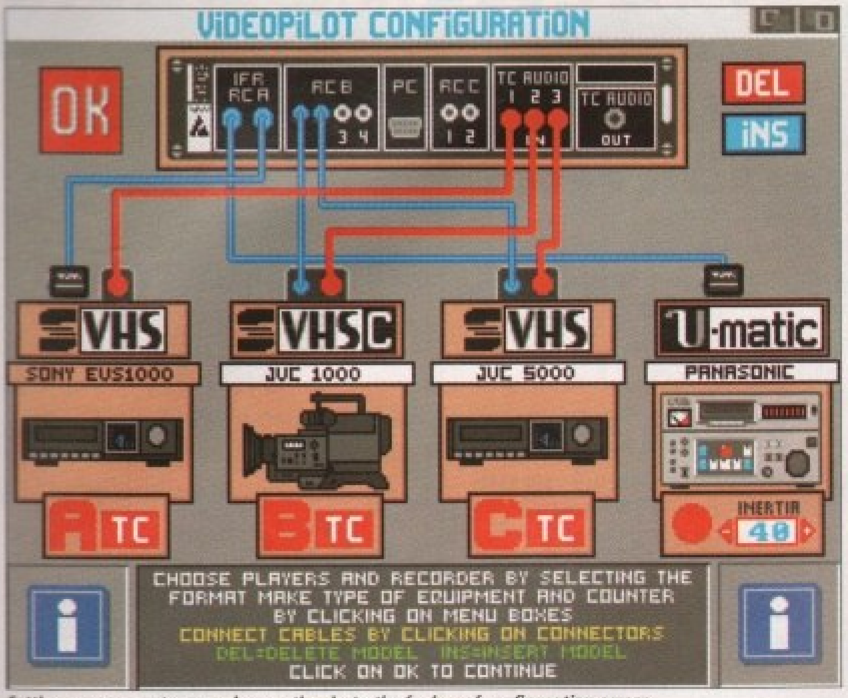
A prime example of this process in action is the configuration screen which displays the rear of the V310 or VideoPilot if you prefer, and four selection boxes for the various players and the recorder.

Configuring the system is simply a matter of clicking on the appropriate input on the V310, then on the player in question. If your selection is incorrect the software throws up a warning and suggest what could be the problem.

To select a player simply requires clicking in one of the four available boxes until the correct make, timecode and control method appears.

If your particular player isn't available you can add the necessary details followed by a trip to the programming screen to teach the infra red unit the correct controls.

When all's well with the system you can timecode the tape and begin to



Setting up your system, made easy thanks to the foolproof configuration screen

Pilot,
ith the Amiga...

construct your masterpiece, with the aid of the onscreen Edit table. This allows old and new scripts to be chopped and changed as required, with wordprocessor style cut and paste operations.

Effects can be added at various points, such as captions, still frames, crossfades and genlock effects which when necessary cause the software to emit a warning bleep, allowing you to operate the desired effect at the appropriate moment.

The inertia of the record machine can also be adjusted to ensure accurate edits and up to eight tapes can be used in the various machines during assembly. Once again, a warning bleep is sounded when the necessary changes are required.

All the shot selections are done via the function keys, with fine-tuning being achieved via single frame advance or, if complete accuracy is required, through the Edit table.

Conclusion

In general, VideoPilot is excellent, and if you're a video nut it may even be worth the asking price. For the professional who wants to free valuable time for more work and less editing it could soon pay for its place in your system.

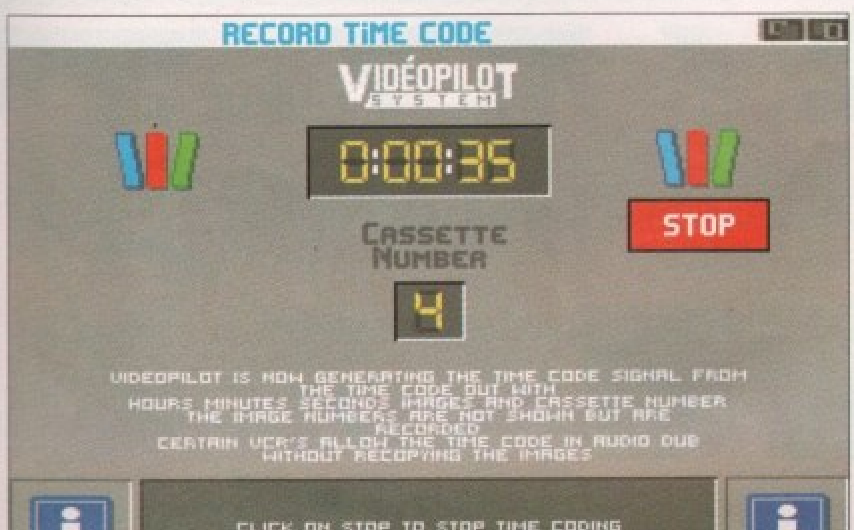
After all, once the shot selection is complete and providing there are no tapes to be change, the system can be left to compile your creation all on its lonesome.

My only criticism concerns the limit of two infra reds which could cause problems on some systems, although of course four hardwire inputs are available for the remaining players. The only other disappointment is the inability to see your edits prior to mastering.

Having had my little moan, both factors are more molehills than mountains and don't do any real harm to what is an very impressive product.

VideoPilot is available from:
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GL54 2LH

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Timecoding your creations in seconds with the simple coding screen

Timecode trickery

Perhaps the biggest stumbling block in both the Amiga and video worlds is the seemingly endless supply of incompatible timecodes which are unsuccessfully vying for dominance.

In the professional market this problem has long been resolved thanks to SMPTE timecode which has been the industry standard in TV and film for years.

In music SMPTE also plays an occasional role along with MTC but unfortunately video is a minefield of formats and VideoPilot does its bit to add to the confusion by employing its own proprietary code entitled V3TC. This, of course, isn't compatible with either VITC or SMPTE systems but does work with RCTC or "artic" as it's known and pronounced.

This happy coincidence is both great news for VideoPilot and Sony who are employing this new format for use with 8mm camcorders. The big advantage of the new system is its ability to retain a full stereo soundtrack without the need for any modifications to the VCR.

Because VideoPilot reads this new format frame accurately it can be edited direct, something which Sony's own RCTC editing system has not yet mastered. So for the moment if you're the proud owner of Sony's CCD–V800 camcorder, VideoPilot could be the perfect choice.

Like everything else, the addition of a timecode can be a case of swings and roundabouts, due to the sacrifice of one of the available audio tracks for timecode information.

If you're working with hi-fi VHS/S–VHS or 8mm units employing PCM sound, it will inevitably mean that you'll be left with a mono soundtrack. You could always combine the sound from both tracks but of course the actual stereo effect would be sacrificed anyway.

On non–stereo VCR's and camcorders adding a timecode will completely obliterate any available sound, so dubbing to a hi-fi machine might well be worth the loss in quality.

Enhancements

E.M.R., the UK distributors of VideoPilot, offer a number of additional services to enhance the abilities of the system. The first of these is to supply a PCM encoder for 8mm source machines equipped with the optional PCM track. The PCM/AFM output is then split into separate mono hi–fi tracks for sound, and mono PCM for timecode.

Other machine formats can have their pre–amplifier circuitry and output sockets modified to keep the original hi–fi sound in stereo whilst still being able to output a separate timecode track to the VideoPilot.

All the necessary work is done by E.M.R. who operate a collection and delivery service using insured couriers to transport the love of your life back and forth in perfect safety.

Compatibility

Because the system supports up to three players and a recorder, a whole range of connections bristle from the rear portions of the black box, which control not only a variety of players but also tape formats and control systems.

As a result almost all machines can be catered for, providing they support either the LANC (Control L) system, which can either be a five pin mini Din socket, a mini jack or alternatively the aforementioned infra red remotes.

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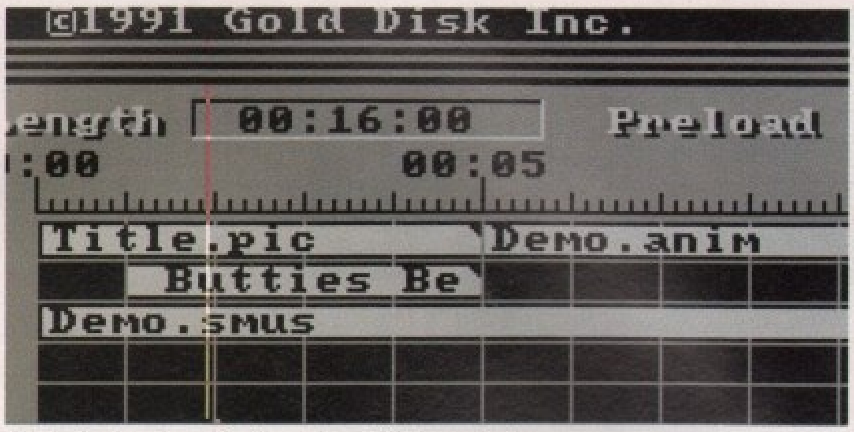


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The timeline in action, with stills running straight into animations

THE SHOW must go on...

Sit back and relax as Paul Austin reveals all with the assistance of ShowMaker, the latest star on the video sequencing stage

Well, what will they think of next? First we had sequence dancing, followed by synchronised swimming and of course sequenced music. Now Gold Disks have gone the whole hog and produced the Amiga's first multimedia sequencing package which claims to control every aspect of the machine's vast array of talents – all from one user friendly interface.

If you're anything like me, at first you'll probably be a little confused as to what a multimedia video sequencer actually does, how it does it, and why you'd want it to do it in the first place. Well to clear the air I feel a short explanation is in order.

ShowMaker's primary mission is to draw together all the Amiga's talents and apply them in one smooth and perfectly sequenced production. To do this it employs the Timeline which is the window at the very heart of ShowMaker.

The Timeline is an event display window which shows all the elements within a production plus their duration, type and position within the creation. The unusual thing about what is in effect a fairly standard sequencer is its ability to control a whole range of events, whether they be external video sources, internal sound effects, musical backing tracks or, of course, animation.

Track talk

Before we delve into the various ins and outs of the system, a quick look a just what ShowMaker is capable of might whet your appetite.


Another view of the timeline in its data list format

When you first enter the program, you are offered the default number of 12 tracks to play with, these being the primary Amiga based internal tracks which control the machine–generated side of the production.

Moving pictures

The first of the 12 is the graphics track which allows you to generate either still frames or animations. These appear as a background on to which titles or effects can be overlaid. The various backgrounds can be produced on any standard Amiga paint package, as either standard IFFs or ham images.

If for example you want a still image, it can be introduced with a variety of wipes and fades. It will then remain onscreen for as long as is specified by the Timeline, only being replaced by the next wipe or fade as the following animation or still is introduced.

It is perhaps best to think of the process as a form of video music with various elements playing for a set time and then being replaced by the next section of the song. So you might have a video verse in the form of an animation, then a series of stills for a chorus, another smaller animation for a middle eight and finally back to the verse.

To keep everything smooth and stylish, animations can be set to loop indefinitely. This ensures that there won't be any problems if your animation runs for five seconds and the particular sequence requires 15 – the software will cycle the animation until the next section of the production.

The frame rate of animations can also be defined so that it will fit the pace of the production. And if you're after a really slick effect, graphics can be defined to keep time with the backing music – as indeed can the entire production – so not only will animations fit perfectly, but wipes and fades will occur on the beat to give a punchy, professional feel.

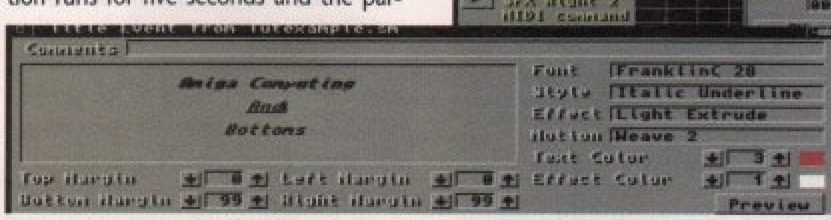
Tricky titling

The next track controls ShowMaker's internal titling software, and to be honest this is the only element which doesn't score well. The problem here is that the designers have bitten off a little more than the Amiga can chew, by designing a titler which attempts to do things which even dedicated titling packages such as Scala and Broadcast Titler 2 don't attempt – namely scrolling over an animated background.

This would be a tricky enough proposition if the machine had nothing else to consider, but when the basic problems are compounded with the need to sequence genlocks, videos, Midi, ARexx and soon NewTek's video toaster, not to mention the remaining nine internal Amiga tracks, it's little wonder that the scrolling is less than silky smooth.

To be fair, for the average amateur the variety of wipes and fades might well make up for the rather stuttered scrolling, but for a professional, titling would have to be done by another method, such as being included within animation.

If you do decide to use the titler option there are numerous goodies thrown in, such as access to your entire font directory plus those present within the software itself, all of which can be presented in the usual array of bold, italic and underlined combinations. There's also a range of drop shadow effects and numerous outlines. In short, if you keep things simple, reasonable effects are possible, if perhaps a little less than spectacular.


Perhaps the strangest caption in the history of titling, all possible thanks to ShowMakers very own titling utility

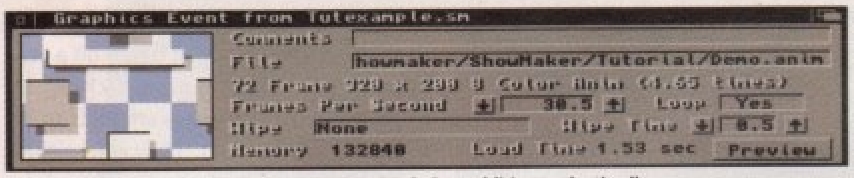
Special FX

The next four tracks all control good old Paula, the Amiga's internal sound chip. Each of the four available channels have their own track, onto which any IFF sample can be assigned – complete with volume definition, optional loop and pitch control. Finally, you can decide whether the sound should have priority over the music track which may be taking up that particular channel at the moment of play–back.

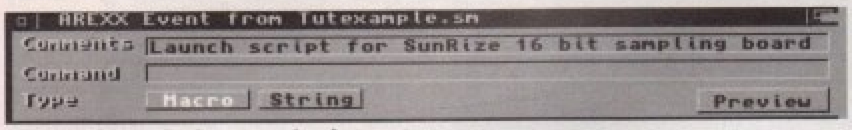
The great thing about these SFX tracks is their flexibility. Because sounds are assigned to events rather than to tracks, the number of samples on a track is limited only by available memory. Literally hundreds of effects could be assigned to the four channels in a single production.

The next talent in the Timeline's repertoire is Midi control. This consists


SMPTE time code ready to orchestrate the action



A chance to examine and adjust your animation before addition to the timeline



ARexx made easy thanks to a very handy requester

> *"Combine your musical and artistic exploits into a complex and impressive presentation"*

of a series of options to control note on/off, note on, control, program and pitch information – all of which is sent by either predefined or user-defined Hex codes to any one of the 16 Midi channels, complete with two data controls to define the note information.

If you are going to use this option, you must known the codes which are understood by the instrument in question. You can then add considerably more spectacular sound effects to you masterpiece via Midi, employing synthesisers and, of course, samplers.

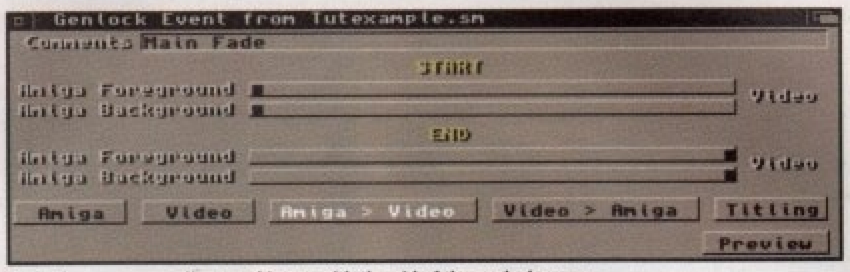
Pump up the volume

Overall volume is the next element of the production to be mastered. This is done via the Volume track, which defines the overall volume of the sounds within a production. For example, the backing music and sound effects could be gradually faded down prior to a voice-over and then faded up to continue with the presentation.

Because this works independently of the sound tracks themselves the level between the elements remains the same, so there's no need to adjust all the tracks within the production individually whenever you need some space in the audio section.

ARexx exploited

Like many power programs, ShowMaker eagerly embraces the potential of ARexx – the inter-program communication language which is exploding in the serious Amiga market. With the assistance of ARexx, ShowMaker can launch all manner of Amiga applications. You can control ARexx-compatible sequencers such as Bars and Pipes Professional, or perhaps employ ARexx-friendly titlers to add real glamour to your graphics.



Designing your own effects and intros with the aid of the genlock screen

ARexx has a complete track available throughout the presentation and can issue commands in either macro or string formats. On top of its own ARexx command potential, ShowMaker also listens to instructions from ARexx itself and has a few simple designer commands of its own, with which ARexx can issue the orders.

Genlock option

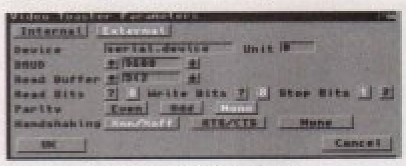
Genlocking Amiga output is big business, and as you've probably guessed, ShowMaker isn't going to be left out when it comes to one of the cornerstones of multimedia. To do it, ShowMaker employs the SuperGen 2000S. Whether this can be substituted for any other genlock is doubtful, but it could be worth enquiring with Gold Disks before you buy.

Controlling the genlock is very simple, and can be done via a number of predefined dissolves or clean cuts which occur between the Amiga and the external video source. The usual overlay options are available and, as is the norm, they are all locked onto colour-0, or background. The four available sliders determine the amount of transition which will occur between the video image and the Amiga during the time specified in the Timeline.

So with the aid of the genlock, smooth transitions between full Amiga and full video can happen either instantly or smoothly over a desired period, and titles can be faded up and down as required. All effects work both ways and do a great job of easing the sometimes painful transition between the Amiga and a live video source.

Toaster talents

The last of the standard tracks betrays the software's origins. As I'm sure you're aware, NewTek's Video Toaster is for the moment strictly an American play thing, but if industry rumours are



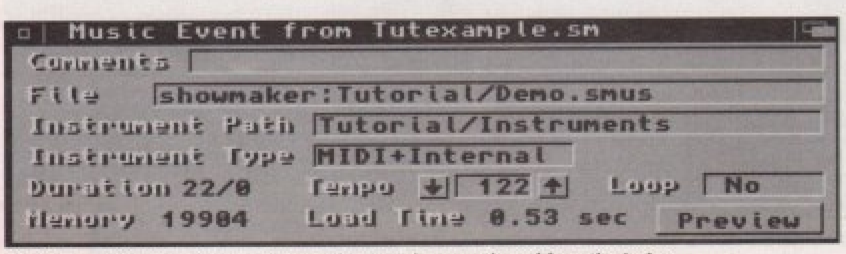
Serial settings for external hardware, familiar ground for comms fans

true we should be seeing this mystical beast of the multimedia world in about 18 months. If the transatlantic reports are to be believed, it should be well worth the wait.

I'd love to tell you how good the combination of ShowMaker and Toaster actually is, but unlike many UK Amiga mags we admit to never having used one – and if the truth were told so would the others. At present the Toaster works solely on NTSC Amigas, so we'll just have to wait until it crosses the Pond.



A musos dream, Midi control from a pre-programmed requester



Music the old fashioned way as internal jmus tracks are activated from the Amiga

The next step

Well folks, that's about it for the 12 default internal tracks, but just when you thought all was safe, ShowMaker adds yet another twist to its already well endowed tail by employing numerous external tracks which are controlled via the serial port.

These extra tracks can command everything from videos to Laserdiscs, and the number of tracks available is only limited by your system and of course the number of suitable drivers – several of which are supplied with the ShowMaker software. The Amiga's numeric keypad is employed to operate the transport on videos and the entire system is configured via a fairly standard comms requester.

Interface info

As you can imagine, making the most of ShowMaker's potential requires a very special interface and fortunately that's just what Gold Disks have provided with one of the best sequencer front ends I've ever had the pleasure to use.

It literally couldn't be simpler. Events are added to the timeline by simply clicking-in the appropriate track, then dragging and releasing when required. This process immediately produces the appropriate requester which then allows you to define wipes, volumes, loops and paths, plus a chance to view or hear the event prior to insertion in to the track.

This click, drag, release and requester approach is identical throughout the timeline and makes production a dream. Adjustments to the track can be done with ease, thanks to a variety of editing modes which can affect individual tracks or the entire production. As you might expect, full cut and paste editing is catered for.

Along with full Timeline editing, there are options to work in a variety of time formats. These can vary from one to sixty second increments, or alternatively as beats, or measures if you prefer musical notation.

The third triumph of the interface is its option to work with an internal sync, external MTC/SMPTE time code or via a Midi clock.

And finally...

As far as conclusions are concerned, ShowMaker is a little difficult, but I'll have a go. If you're one of the many on a limited budget ShowMaker would best be described as a good package which is occasionally prone to the odd stutter. If you're looking to combine your musical and artistic exploits into a complex and impressive presentation, it's ideal.

Having said that, the software's real strength is as a conductor rather than a performer. If you have access to vast mounds of external equipment, ShowMaker is sure to be a godsend, with the ability to unify all of their individual strengths in one stunning production. As such it comes highly recommended...

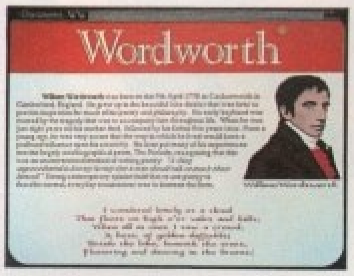
Showmaker is available from Centresoft Ltd, Unit 2/3, Holford Way, Holford, Birmingham, B67 8X. Price: £241.95

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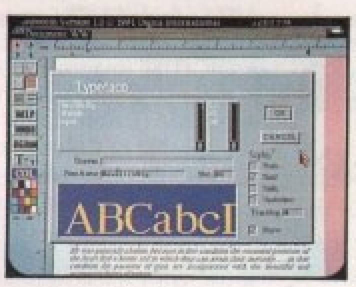
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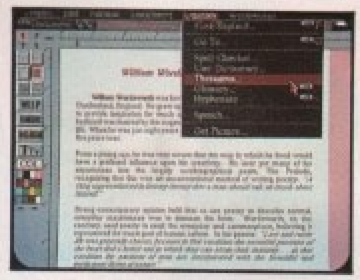


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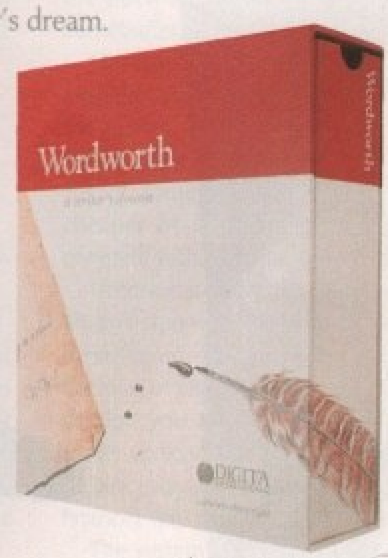


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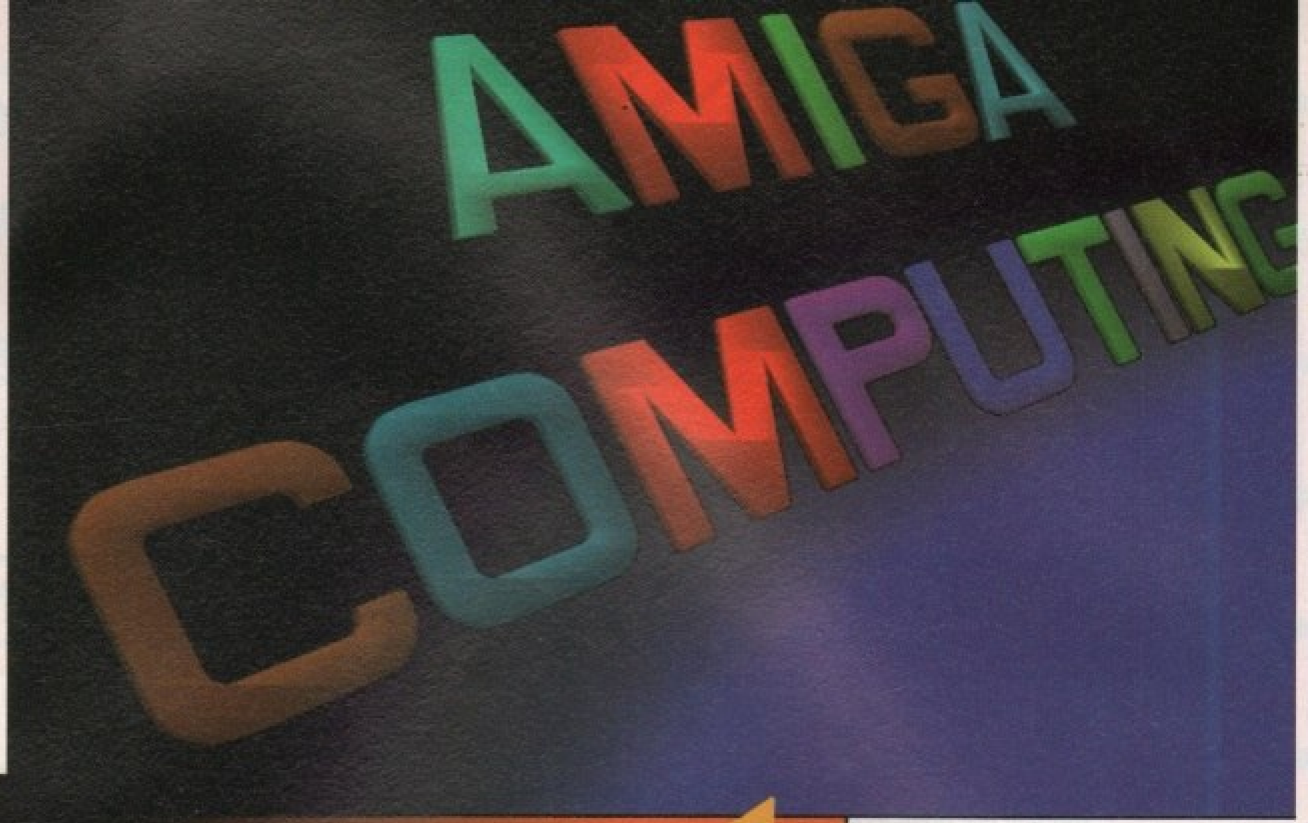


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In recent months most of the conversation in the Amiga art world has been dominated by the release of Dpaint4. This isn't surprising as it's as far as most of us are likely to aspire for both ability and expenditure, but in comparison to TVpaint even the latest Dpaint is no more than a plaything.

On the serious side of Amiga art the pros have been praying for the release of a 24-bit paint package which will match up to the talents of the ever increasing array of 24-bit boards.

These miraculous bits of hardware give access to a palette of over 16,000,000 colours and when these boards are combined with ray tracers and powerful CAD packages, broadcast quality images pour from the Amiga equalling anything produced on infinitely more expensive systems. Such Amiga imagery already appears on TV and in films, bringing gasps of amazement from Amigans who mistakenly assume that such work is far beyond the abilities of their lowly home micro. How wrong they are...



An example of the density tool in action, complete with a logo created using Caligari and imported in Rendition mode. Finishing touches added with TVpaint's density tool

24 carat colour



Paul Austin drools over TVpaint, the Amiga's first 24-bit paint package

It's true that to produce such results on the Amiga does requires a good deal of investment, but in comparison with commercial alternatives it's a mere drop in the financial ocean.

Video work

As you're probably aware, the Amiga is *the* machine for video work. Literally every graphic artist working seriously in the field employs an Amiga in some aspect of his or her work.

Up until now this has mostly meant that the Amiga was used primarily as a rendering engine, producing either stills or animation on a 24-bit board which are then passed on to commercial hardware such as Quantel's Paintbox – the hardware which has long been the industry standard in TV and film. Because of Quantel's long established dominance in the field and a price tag that would leave even the largest donkey gasping for breath, it has managed to attains the lofty position of artistic demigod in the electronic art world. But is its reputation deserved?

For the frightening asking price of Paintbox, you'd think the system would do everything but walk the dog. In fact it does little more than Dpaint but of course all in full 24-bit colour.

Even with its impressive commercial credentials it certainly won't animate and would never even consider trying its hand at ray tracing. Such pastimes are purely for the Amiga and programs such as Real3D, Imagine and Caligari to name but a few, all of which have built-in 24-bit output and animation options as standard.

With Quantel you pay for pure image quality and the ability to transform ideas direct from the artist into the 16,000,000 colours and incredible resolution that only Quantel – and now TVpaint – can offer.

The great news for semi-professionals, professionals and enthusiasts, is that the prohibitively expensive Quantel dominance is about to end and TVpaint is the software to do it, by offering the full range of essential paint package skills – all of which are applied in the full glory of 24-bit colour.

With the average Quantel system costing around £40,000, TVpaint's paltry asking price of £800 plus VAT is ridiculously cheap. Even when the extra hardware requirements are considered, it's still possible to produce 24-bit animation and art solely on the Amiga for under £5000, and that includes the price of an Amiga 2000 to house all the assorted goodies.

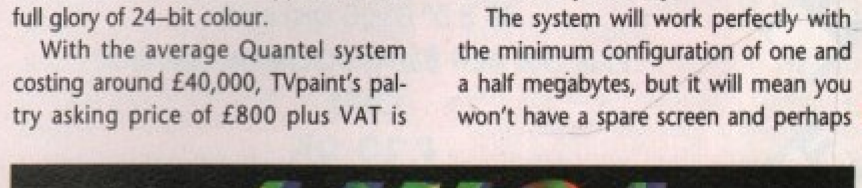
Essential hardware

To quote £800 for TVpaint is perhaps a little misleading as there are a few other odds and ends essential to get the system up and running. Perhaps most important of all is is TVpaint's inseparable partner, namely the Harlequin framebuffer.

Harlequin was the first, and is arguably still the best framebuffer on the market. Even today it is one of the few boards to boast any pixel and colour, something which many of the cheaper 24-bit boards simply cannot compete with.

Unfortunately the decision-making doesn't stop with just the purchasing of a Harlequin, as there's the agonising decision of just which Harlequin configuration you require. This decision is purely up to you and will be a matter of balancing your needs with your finances very carefully.

The system will work perfectly with the minimum configuration of one and a half megabytes, but it will mean you won't have a spare screen and perhaps ➤



Another example of fonts in action with the addition of yet more colour added with airbrush, cycling, and smoothing – all locked into the letters with the aid of the stencil option

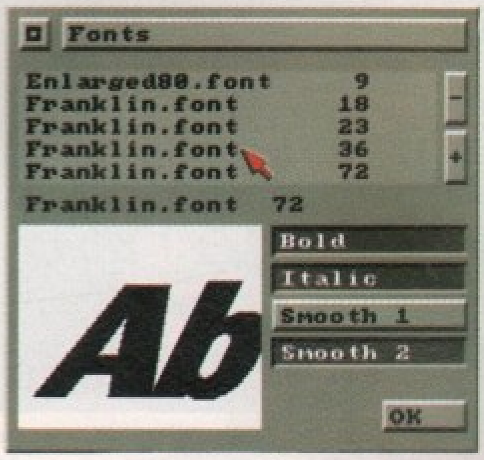
more importantly there will be no undo option. If you're as clumsy as me this can be a real problem, but if you think methodically and make regular saves, major disasters can be avoided.

To enable both the spare screen and the undo feature, a minimum of three megabytes is required. If you want to go the whole hog and utilise the Harlequin's Alpha channel you'll need the maximum of four megabytes. Who needs a holiday, a social life, a home...not me!

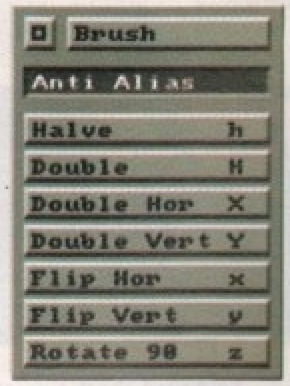
If you're the owner of an alternative board, I'm afraid you'll have to wait until compatible software is available as TVpaint is Harlequin only. It's a case of upgrade or wait a little longer.

Aside from the Harlequin, another essential add-on is a 68030 accelerator, preferably fitted with an FPU or maths co-processor. Between two and four megabytes of 32-bit memory wouldn't do any harm, but it isn't essential.

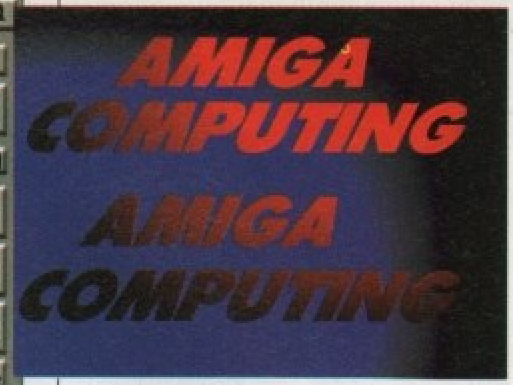
Obviously those lucky souls blessed with a 3000 can skip this bit and spend the money on surgery to make their smug smiles even more permanent than they already are.







Just a few of the many requesters available from the main panel. In the magnifier lurks a close-up of the small sphere, giving a graphic example of the incredible resolution that the package can achieve



A Scala font with one of the two optional smooth controls, pasted over the now familiar density graduation

Second mortgage

Right about now you'll probably be thinking about a second mortgage, a bank job, or perhaps what's on the next page, but remember we're taking about imagery that George Lucas, Steven Spielberg and the average advertising executive would kill for, so keep that in mind before you turn to the games section and the killer nutter ninja turtles.

Next on the shopping list comes a hard drive. This isn't strictly an essential but with even small files running to over 100K a floppy wouldn't be too smart. About 40 meg would be a sensible amount but as someone once said the bigger the better, fnarr, fnarr...

The last in the line of add-ons is an extra monitor, preferably a multisync or VGA, which would of course require a flicker fixer if you're working on a 2000. If you're a 3000 owner you could always go for a bit more surgery or perhaps start saving for a 68040 upgrade.

Theoretically it should be possible to use the CVBS output from the Amiga and put that into the CVBS on the monitor thereby freeing the main RGB for the output from the Harlequin.

Switching between the Harlequin image and the workbench screen would then just be a matter of selecting the input on the monitor. Unfortunately when this was tried with a 1084 monitor the CVBS input was completely out of sync and unusable.

It may well be possible to share inputs on another type of med-res monitor, but to be honest this would only be a temporary measure as the system really needs a hi-res monitor to be at its best. Apart from the lower image quality there's also the added disadvantage of image loss.

'Imagery that Steven Spielburg would kill for'

For example if you're working with a hi-res Harlequin output of 910x576, a standard Amiga monitor simply doesn't have the number of pixels available to display the entire page, so sooner or later a hi-res monitor would be required for any serious use.

Another optional element would be one or more of the many 24-bit compatible ray tracers and CAD packages, the likes of which where mentioned earlier and described in the *image info* boxes throughout the article.

Interface information

Once you've made the appropriate investment, the next task is to install the software. This is done automatically and all that's required is the partition name. The only other essential is the dongle which must be present in the parallel port before boot up. With an asking price of £800 plus VAT, it's not entirely surprising that the French authors Tecsoft take the odd precaution against piracy.

Once the software is installed and the dongle inserted, the program defaults to a opening screen which allows you to select one of the three available resolutions and whether or not you require the Undo or Function options.

The final choice is the whether you require the present screen on the frame buffer to be retained. This is a useful function if you want to touch up your latest ray tracing before committing it to digital posterity.

When your selection is complete, the Harlequin screen clears and redisplays complete with the TVpaint selection panel. Unlike Dpaint, all the available options are accessed through this single requester which operates with a combination of right and left mouse clicks, in a similar manner to that of Dpaint's control panel.

One of the many examples of the double button system is the Density control which can be invoked by a single left mouse click or altered with the right. As soon as the right mouse is selected the density requester appears and can be redesigned with any of the many presets, or altered manually with the mouse.

Using the software is simplicity itself and will take the average Dpaint fan a matter of minutes to come to terms with. The only real difference between the two is TVpaint's lack of animation and, of course, the absence of any pull-downs.

Power features

One of the first points raised in the excellent accompanying manual is the design teams' approach to the software itself. Rather than being a techno-junkies nirvana complete with all manner of scripts and programming protocols, the program is very simple. The technology trap is easy to fall into when designing power programs, but thankfully this particular pitfall has been avoided.

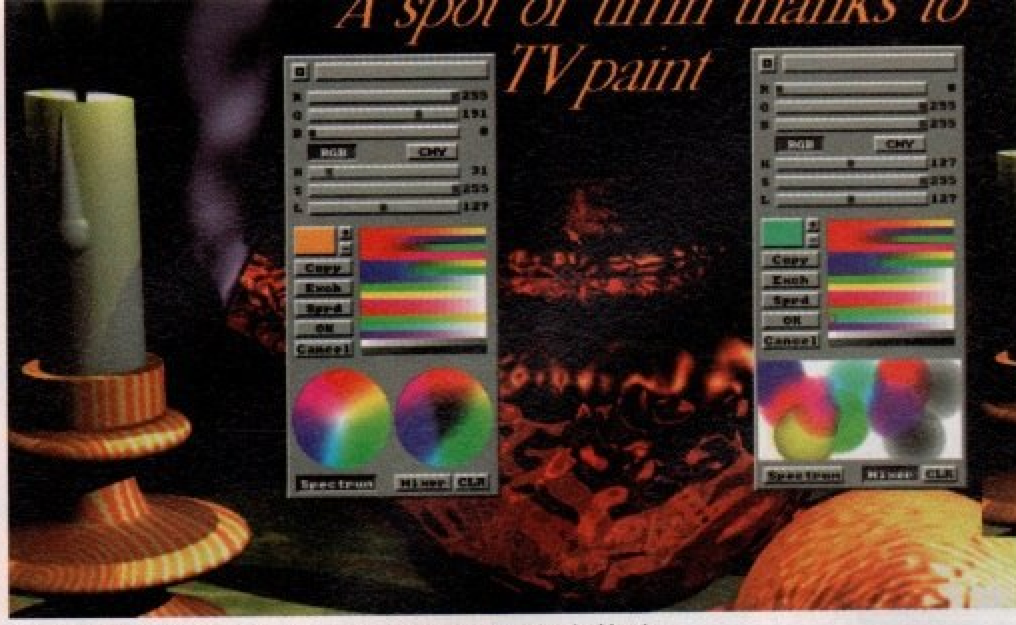
One of the first examples of this user friendly approach is the floating control panel which can be moved and placed anywhere onscreen, only changing position at your command. This also applies to all of the sub-menus, and as a result the flow of work isn't interrupted by annoying permanent requesters which need to be removed from the keyboard.

The Undo function, which is available with the larger Harlequin configurations, doesn't stop with a simple erase or replace but can be set up with parameters which can be activated from the opening format screen or the system requester on the main control panel.

The spare screen option has obvious advantages as any Dpaint fan will tell you but an added bonus is PVpaint's Transparency option which allows the spare screen to be mixed with the foreground of the present screen. Some



A closer look at just what the density tool is capable of. Polygons, spheres and rectangles all filled with the limitless number of definable density patterns available from the requester



A famous example of Real3D, with a touch of text and TVpaint's invaluable mixer and spectrum controls, allowing access to the full palette of 16,000,000 colours



A clean look at Real's modified Kettle, complete with steam thanks to the airbursh and a sun burst added with the density tool

other Dpaint–like options are the separate button/separate colour option for the mouse and the usual variety of brush options which include lasso polygon and rectangular brush selection – all of which can be rotated and re-sized in the classic paint package manner.

As well as the invaluable Density control, which was mentioned earlier, the system also boasts a range mode which can be defined over either the entire palette or just a specified range. As you can probably see from the screenshots, when the range option is combined with the airbrush effect the true power of 24–bit starts to appear, as the entire spectrum scrolls through a single mouse stroke.

It is perhaps the airbrush that best shows the power of the Harlequin and TVpaint combination. On more than one occasion I found myself trying to remove dust from the monitor which in fact were merely faint traces of paint left by a wayward manoeuvre with the mouse. To be honest it took all my meagre mental powers to drag myself away and try out some of the other features.

Perhaps the most confusing part of using a 16,000,000 colour palette is how exactly it can be accessed without the use of a palette displaying every colour. As you can imagine, a requester showing all the colours would be about 50 feet long and almost impossible to apply.

To combat this a whole range of palettes can be cycled through and if a specific colour can't be found, individual colours can be edited by either their RGB or CMY colours. If that's still not enough, they can be selected direct from two spectrum disks at the bottom of the requester.

If that's still not enough, various colours can be blended in the mixer – an option which allows individual colours to be sprayed on top of each other and mixed manually.

The last of the colour controls is a Gamma option which allows you to adjust the Gamma curve on either the entire image or combinations or the RGB elements. This can be particularly useful if you want to lift the colour balance within an image, but saving out beforehand is an essential as sometimes it can do a little more harm than good.

Apart from the power of the paint package itself, the other essential of any 24–bit package is its compatibility with the myriad of graphic file formats. Fortunately for TVpaint, all of the essentials are ready and waiting with full support for 24–bit IFF, TGA, Rendition and Deep modes, so no matter what output you and your ray tracer prefer, TVpaint should be more than happy to import your latest creation.

The final element of the TVpaint equation is its ability to multitask with perfection, allowing you to jump between the paint package and any other Amiga application which you may wish to employ.

When you've finally decided on the colour composition and loaded any relevant files, the real work can start. This is where the now almost mandatory keyboard short cuts come into their own, making everything from selecting an airbrush to specifying magnification as simple as a single keystroke. As a result, commercial artists should be able to use their valuable time to the full and leap from one tool to the next with ease, pausing only to cash a cheque and send an invoice.

Artistic opinions

As you're no doubt aware I'm not exactly disappointed, as indeed I didn't expect to be for a package that retails at just under a £1,000 minus the essential hardware.

Having said that, and considering the alternatives which approach over 50 times the price for what is essentially the same system, TVpaint has to be good value.

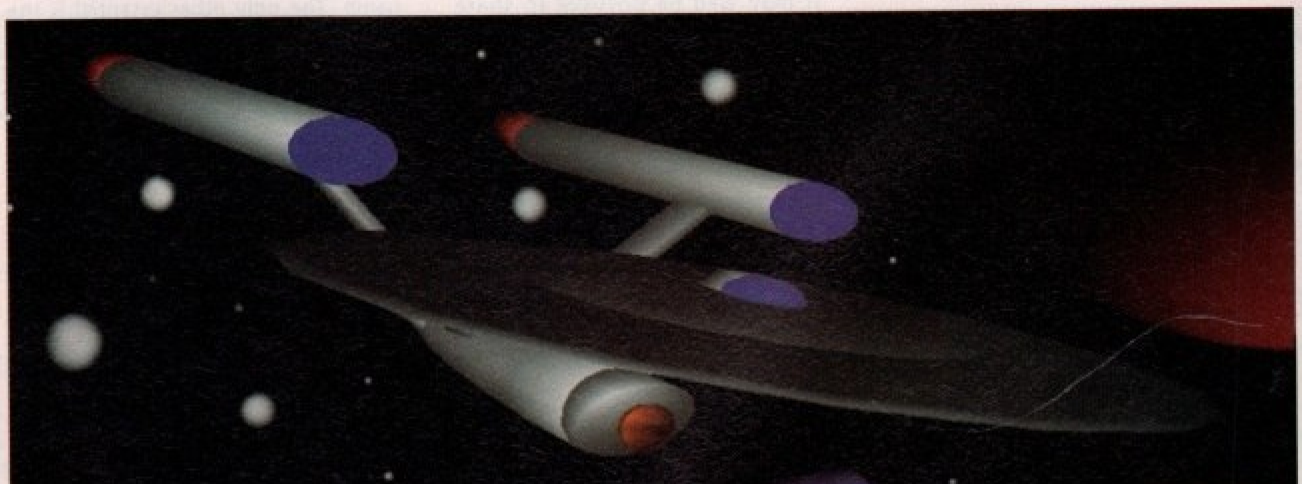
My only real complaint is the software's tendency to crash occasionally, which I must admit is infuriating, especially if you're in the final throes of your *piece de la resistance*.

To be fair to the software, it's a strong possibility that the fault lies with my rather elderly 2000 rather than the software itself.

To clarify the crashing problem I took some advice from Martin Lowe at ASC, who assured me that such problems are unheard of north of the border, and must be either the fault of my elderly companion or perhaps due to TVpaint's need for a rather a weighty amount of continuous memory on the parent machine.

On the whole the complete package comprising the Harlequin, a 68030 and TVpaint is quite simply incredible, and is sure to help in the production art that only Quantel's paintbox can compete with. And all for just a fraction of the price...

TVPaint is available from:
The Amiga Centre Scotland
4 Hart Street Lane
Edinburgh EH1 3RN.
Tel 031-557 4242
Fax 031-557 3260
Price: £940 including VAT



A closer look at just what the density tool is capable of. Polygons, spheres and rectangles all filled with the limitless number of definable density patterns available from the requester

Video visuals

If you're looking for a genlock, then let Jason Holborn guide you through the options available

If you fancy yourself as something of a would-be Speilberg, then you may well be surprised to learn that you already own one of the most powerful video devices ever developed. With little more than your Amiga, a video recorder and a device called a genlock, you too could create video effects that would have left BBC video engineers dumbstruck little more than a few years ago.

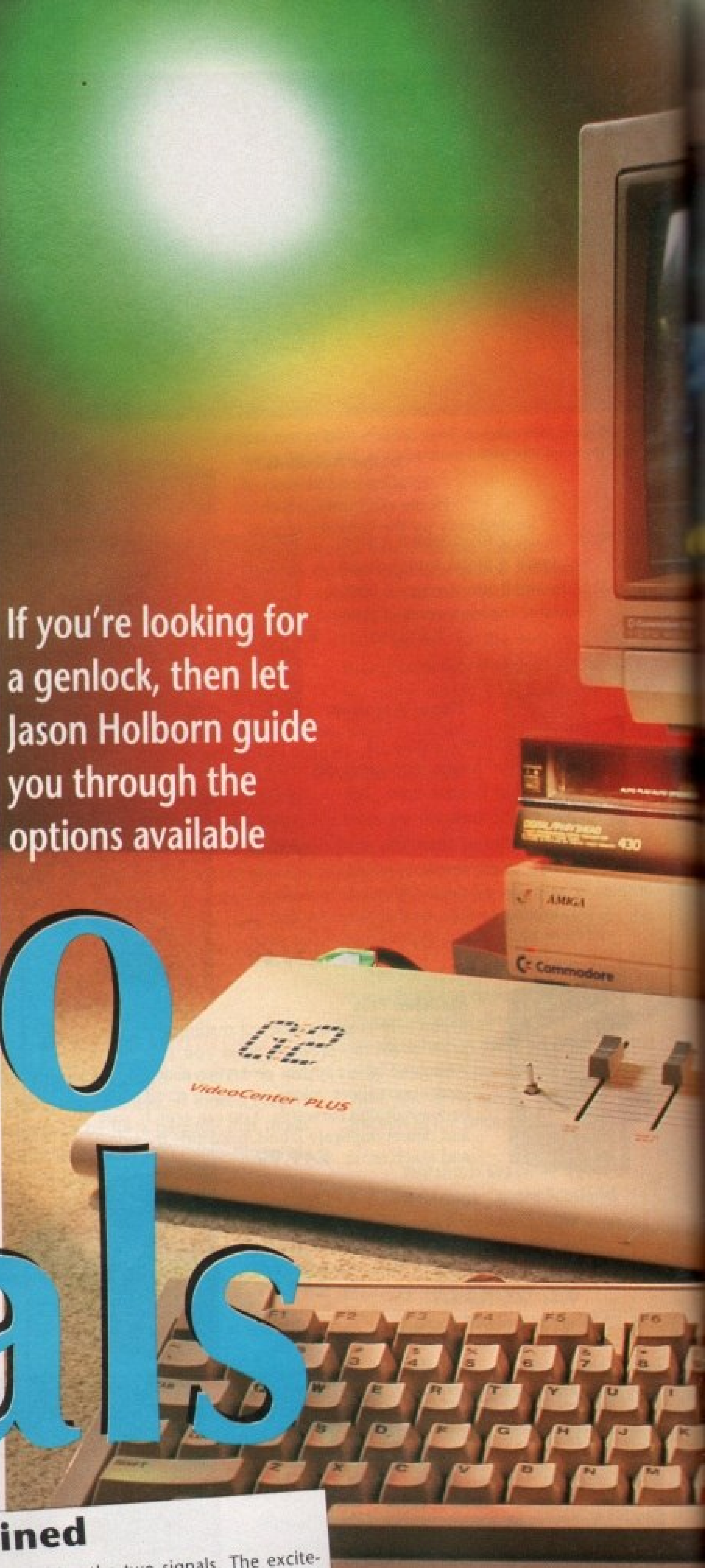
The key to all this power is the genlock, a sophisticated little device that has revolutionised low cost video production on the Amiga. Genlocks are available for other machines, but the Amiga's obvious power has allowed developers to produce professional quality genlocks at a fraction of the cost.

Atari may have coined the phrase, but the Amiga is still the only machine that can truly claim to offer "power without the price" where video is concerned. You'll find the Amiga being used in conjunction with professional video decks, video processors, chromakeys and paintbox systems within many professional post-production houses. Even on the television you'll find the Amiga's talents at work – check out the ITV Chart Show, for example.

So what is a genlock? Well, put simply, it's a device which allows you to combine the video output from your Amiga with the output from a video recorder or camcorder.

Specialist circuitry within the genlock allows the background colour of the Amiga video signal to be replaced with the video output from your VCR. This process allows you to overlay titles onto your home videos and a lot more besides.

Choosing a genlock is a complicated process which must not be entered into lightly. If you do, you could well end up with a genlock that is quite unsuitable for your particular application – worse still, you could waste a lot of your hard earned money. So, before you write out that cheque, read our mega round up of the current state of the art in Amiga genlocks.



Genlock jargon explained

Everyone knows that a genlock overlays computer graphics onto an external video source, but how does it actually work? Well, believe it or not, the actual process of overlaying – or "keying" as it should be called – is actually a very minor function of the genlock.

Genlocks carry out three basic functions – they code, genlock and key video signals. Coding is a process whereby the RGB output from the Amiga is converted into either PAL composite or Super VHS format, depending on your individual requirements. If all you want to do is to record the output from the Amiga onto videotape, then a coder is all that you will need. However for true desktop video, the genlock's second and third functions come into their own.

Contrary to what you may have been led to believe, genlocking itself is not the process which allows the Amiga's graphics to be superimposed onto video. Instead, genlocking is actually a process whereby two separate video signals are synchronised internally at sync pulse level, bringing them in time with each other. Without this all-important process, it would be impossible to combine the two signals. The excitement doesn't really start until we get to keying. Keying is a process whereby the video image completely replaces certain parts of the computer image.

Contrary to what you may think, the genlock doesn't look for a certain colour when keying the signal – you could have two identical blacks in the signal with only one being keyed, for example. Instead, keying works at colour register level. Most genlocks allow only colour register zero to be used as the key colour, but more professional units allow you to change this.



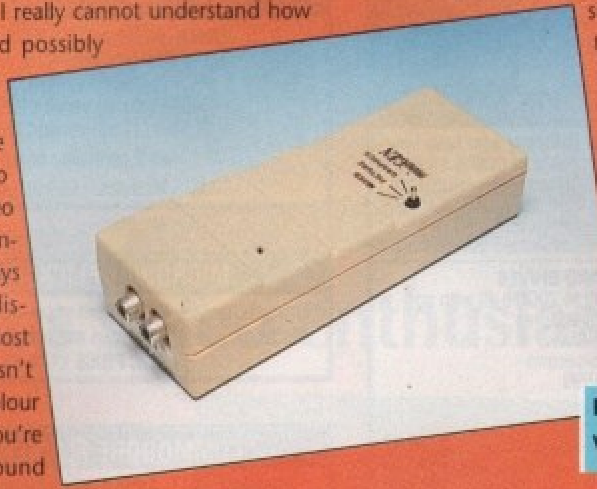
For the first time buyer...

ASAP MiniGen

£117 – ASAP Tel: 0724 280222

At the bottom of the genlocking pile is MiniGen, a cheap and very cheerful genlock that has been around for a number of years now. Up until the release of Roctec's RG300, MiniGen was the choice for home video enthusiasts on a budget, but it is starting to show its age.

The MiniGen hardware consists of a pretty uninspiring little cream box, in much the same shape as Commodore's A500 TV Modulator. Connector wise, there's not a lot to talk about apart from the usual composite video-in and video-out connectors and a 23-pin connector to connect the thing to the Amiga. Surprisingly it doesn't have an RGB pass-through, which really is a silly omission. I really cannot understand how hardware manufacturers could possibly be unaware of the importance of RGB pass-through.



The genlock has three modes of operation – Video only, Amiga only and Mix. Video only displays the incoming composite signal, Amiga only displays the Amiga image, and mix displays the two together. Like most budget genlocks, MiniGen doesn't allow you to control which colour register is used for keying, so you're restricted to just the background colour. This isn't too much of a problem really, as most home users will probably have no need to alter the keying colour.

MiniGen doesn't come with any software at all which is yet another big disappointment. Most genlocks at least give you a couple of test images – some even come with complete packages – but you're on your own here folks! As it is, a good video titling package should also be on your shopping list.

The overall image quality of MiniGen was thought to be pretty good a few years back, but it has aged terribly. Some screens suffer terribly from colour bleeding and the genlock occasionally seems to lose sync even when using a good clean source signal. That said, MiniGen isn't that bad – just ask the thousands of satisfied users across the country!

MiniGen was a revolutionary piece of kit when it was released a few years back, but it no longer cuts it. It will do the job, but this is about as far as things go. If you're after a budget genlock, then the Roctec unit is definitely a better bet.

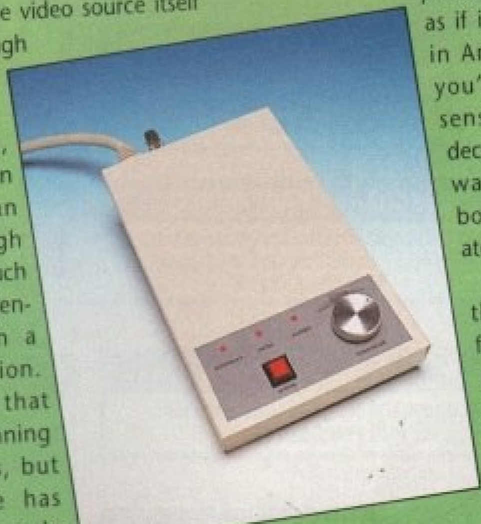
Performance..........................65%
Value......................................70%

RocGen RG300C

£117 – Silica Systems Tel: 081 309 1111

During it's few months on the market, the RocGen has become the choice for video enthusiasts on a budget. It has a number of flaws, but its obvious talents more than make up for these.

The Roctec RG300C comes to you in a rather flat little box sporting more knobs and whistles than a fairground organ. It connects to the Amiga via a long cable with the video source itself being fed in through a phono connector.



Like MiniGen, the RocGen doesn't have an RGB pass-through either, which is such a shame for a genlock with such a high specification. Rumour has it that Roctec are planning to correct this, but nothing more has been heard from the company since the genlock's release.

The RocGen too can be operated in three modes – Amiga only, Video only and Mix – but it goes further than both the Rendale unit or MiniGen thanks to its powerful fade and dissolve controls which are built in to the genlock as standard. These two modes allow you to fade in and out the Amiga graphics and fade between Amiga graphics only and video only. This feature alone makes the RocGen a very good bet.

The RocGen does come with its own software but – to be frank – it's not worth the disk that holds it. There's the usual selection of test images plus a very naff video titling package that looks as if it was written in AmigaBasic. If you've got any sense, some decent video software should be bought immediately.

I must admit that despite its flaws, I like the RocGen. It's a shame that it doesn't have an RGB pass-through, but then an upgraded RocGen should eventually be made available (don't hold your breath though!). For home video enthusiasts who don't need lots of fancy features, the Roctec RG300 is the genlock to be seen using.

Performance..........................80%
Value......................................85%

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Rendale A8802

£200 – Marcam Ltd Tel: 081-941 6117

Rendale's A8802 is one of the few real classic genlocks available for the Amiga. It too has been available for a number of years now, but it's still a very capable system which offers near broadcast quality output at a very reasonable price.

The Rendale hardware is pretty boring – a little box that connects to the Amiga RGB port. Unlike both MiniGen and RocGen, it does have an RGB pass-through, which is nice to see. The composite signal is fed to the genlock through a BNC-style connector, therefore allowing the cables to remain firmly connected – there's nothing more annoying than ripping a cable out of its socket halfway through a genlocking session!



Unlike both MiniGen and the Roctec unit, the Rendale doesn't have mode switching built in to the genlock hardware. That's not to say that mode switching isn't supported though. The Rendale fully supports the usual three video modes, but before you can take advantage of this you must get out your trusty soldering iron and actually *make* a mode switching cable yourself. It's a pretty simple bit of wiring, but it's annoying that Rendale didn't build the cable in to the A8802 in the first place. Most users don't like tinkering around with the internals of expensive equipment and I'm quite sure that Rendale could end up with a few dead genlocks as a result. What the Rendale has got going for it is image quality. The A8802 was originally designed for semi-professional use, so its genlocking hardware is of a very high standard. In fact, it's not far short of broadcast quality. If you then chuck the output from the Rendale through a PAL , the results that you will get will look very professional indeed.

One very nice feature of the A8802 is that it can be upgraded to Super-VHS for around £400. This may seem rather steep, but this price also includes the cost of that extra fade box that comes as standard with the Super-VHS A8802.

If you're after a high quality genlock along the lines of the G2 Video Centre but can't quite afford the extra cash, then the Rendale A8802 is a good bet. Not only does it produce very high quality results, but it can literally grow with you, assuring that your new toy doesn't become outdated.

Performance..........................75%
Value......................................70%

For the serious video enthusiast...

Rendale A8802 S-VHS

£599.99 – MarcamTel: 081-941 6117

The follow up to the classic A8802 is the Super-VHS A8802, a genlock that offers a lot more than just Super-VHS compatibility. Coming in at just under £600, it offers good value too.

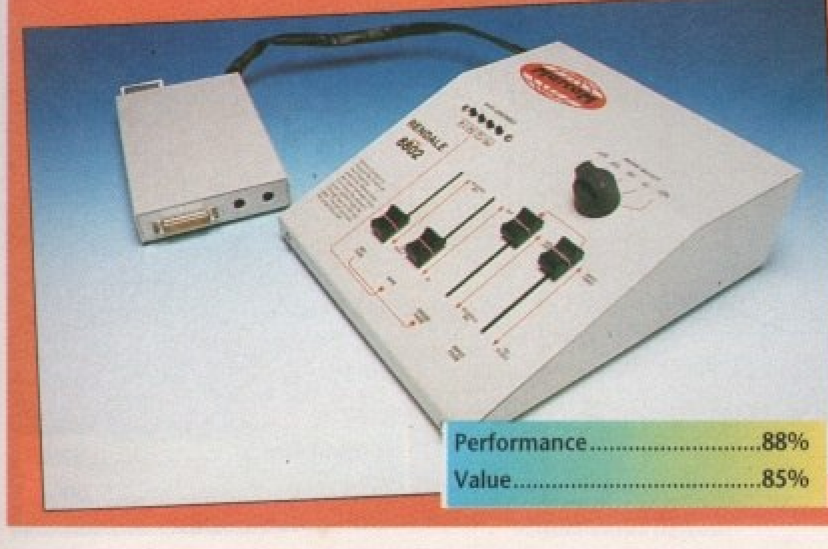
Like most Super-VHS genlocks, the Rendale doesn't just support S-VHS. If you feel like taking the plunge straight away but haven't got access to S-VHS decks, then the unit can still be used with a composite video signal by simply flicking a switch on the back of the unit. Obviously you won't get the same image quality, but you still get all the extra features that the S-VHS A8802 has to offer.

Probably the most striking difference between the normal A8802 and the S-VHS A8802 is the inclusion of a bulky but nicely presented effects control box that is about three times the size of the genlock itself. All connections are made through this box, with a simple lead connecting all this video wizardry to the actual genlock unit. This fader box must be brought around from the back of your Amiga to sit next to your Amiga keyboard, allowing easy access to its controls.

Thanks to that extra box, the A8802 fully supports the usual crossfading and fading to black that is common with genlocks of this price. However, it also supports a number of powerful wipes that will allow you to create some quite stunning effects within your video productions.

Using a combination of the controls available, it's possible to create left, right, up, down, top left, bottom right, middle of the screen wipes and a lot more besides. Clever use of these wipe effects can produce some very nice effects.

As you'd expect from a Rendale genlock, the quality of the genlocked signal is very good indeed. Once again, it's not quite up to broadcast quality spec, but it's more than good enough for semi-professional purposes. When you also consider its relatively low price, the Super-VHS Rendale is a very good bet indeed.



Performance..........................88%
Value......................................85%

GST Gold

£550 – Third Coast Technologies 0257 472444



Performance..........................72%
Value......................................70%

You may not have heard of GST, but they're a big name within the ST market. Indeed, they were one of the first companies to produce a workable genlock for the ST, a machine that was never really that good at video work. Now they've started producing their wares for the Amiga, but the competition is somewhat tougher.

Like all GST's products, the GST Gold lives inside a brilliant colour co-ordinated black box about the size of a good thick hardback book. It fully supports both Super-VHS and composite signals, so it's not let down in this department. On the front of the genlock are a couple of controller knobs which allow you to alter the contrast, luminance and colour of the incoming signal. Very few genlocks seem to offer these controls, so this is definitely one up for the GST Gold.

The documentation which comes with the GST Gold is pretty good... if you can read French, that is. Perhaps I'm just being picky, but it would have been nice to have had an English manual. My French is pretty appalling, so getting to know the GST Gold was something of a struggle to say the least. So if you order a GST, make sure that you insist on an English manual.

One very nice feature of the GST is its built in RGB splitter, which is not actually that useful for desktop video, but is a real boon if you own a video digitiser. So, if you also own a digitiser like DigiView or Rombo's Vidi-Amiga, you can use the genlock to separate a composite or S-VHS signal into its component red, green and blue signals. It's really nothing more than a gimmick, but it's handy nonetheless.

The genlock itself seems pretty basic, although the image quality is very good indeed. Surprisingly, it doesn't offer any form of wipes or fades, which is definitely not going to help it, especially now that budget units like the RocGen offers these for considerably less money. In all, you're probably better off with the Rendale.

Genlocking top tips

If you want to get the best from your new acquisition, then follow these handy hints:

1. When overlaying graphics, always try to use the best possible quality composite video source. Try to avoid using second generation videotapes. If you do, you may find that the image will break up terribly.
2. For more professional work, avoid using low resolution composite video decks. If you can afford it, go for Super-VHS or even Hi-8.
3. Avoid highly saturated images – these can cause terrible amounts of colour bleeding.
4. Use decent quality video cables, preferably cables designed specifically for video signals. These shielded cables cut down signal noise and interference to a minimum.
5. If you are using standard composite VHS, then it's well worth investing in a PAL encoder – a device which gives better image quality when the genlocked signal is laid down on to videotape.
6. Keep your video graphics as simple as possible – the bolder the image, the clearer it will be when recorded onto videotape.
7. Titles look a lot clearer and more readable if you add a black outline around them. This also cuts down colour bleeding.
8. A good investment is a sound mixer. This will allow you mix the sound from the original videotape with a commentary and possibly even a backing track.

The professional choice...

Most of the genlocks featured would be fine for serious video applications, but even these aren't quite up to the task of handling broadcast quality video like that required by video post-production houses.

Thankfully, Amiga developers have got this covered too. It's beyond the scope of this article to mention them in any great detail, but here's a quick run down of some of the more common professional units available.

G2 VC3 - The big brother of both G2's VC1 and VC2 is the VC3, a broadcast quality genlock that is selling like hot cakes at the moment. The reason for this is simple – the VC3 is the only Amiga genlock that supports YCrCB (YUV) output. If you don't know what it is, then chances are that you don't need it!

MaxiGen - Like most professional genlocks, MaxiGen comes to you in 19in, 1U rack-mount format, so it can be installed easily and securely within a professional video environment. It supports Super-VHS and PAL composite with full broadcast quality output.

Neriki ImageMaster – Offering basically the same features as the MaxiGen genlock is the Neriki range of genlocks. These too come in rack-mount format and offer the usual selection of wipes and fades with broadcast quality output in PAL, composite and Super-VHS formats.

Rendale A8806 - Rendale's flagship genlock is the A8806, a very nice little number that also comes in rack-mount format. It too offers broadcast quality output with the usual selection of wipes and fades. It's also dirt cheap – at just under £900, it represents very good value for money.



Video professionals will go for expensive rack-mounted equipment such as the Neriki ImageMaster



Video Center Plus

£1170 – G2 Systems Tel: 0252 737151

G2 Systems Video Centre is actually available in three different configurations starting with the basic Video Centre, moving up to the Video Centre Plus (reviewed) and finally the professional quality Video Centre 3. As a result, G2 is a company worth talking to regardless of whether you're working for the BBC or your Aunty Mavis.

Both the VC1 and VC2 consist of neat consoles which sit on the desk next to your Amiga. The VC3 is a rack-mounted unit which is controlled via a separate remote unit. The VC1 and VC2 are very similar apart from the fact that the VC2 has a few extra features which video professionals may find useful.

As you'd expect, both the VC1 and VC2 will allow you to perform a number of fade and dissolve effects via a pair of slider controls on the console front panel. These are basically the same as the fade options available on the RocGen – crossfading and fade to black – although they are performed rather better.

One nice feature of the VC series is that you can change the keying colour which is used when overlaying graphics.

This is a surprisingly rare function to find on an Amiga genlock, although – to be fair – it has to be said that the Super-VHS Rendale can also do this. The key register is changed by setting a series of dip switches at the back of the genlock, so it's worth having a good ball-point pen on hand to do this.

Unique to the VC2 is a set of 20 wipe functions which will allow you to add a bit of class to your video productions.

These wipes allow you to view either the Amiga or background video through one of 20 variable sized and shaped patterns. These patterns include circles, rectangles and diagonals. These effects can be positioned anywhere on the screen thanks to a joystick control built in to the console.

Overall, the VC2 is a powerful and very capable genlocking system that, whilst not being broadcast quality, is suitable for most semi-professional video applications.

In fact, the only thing I could find to complain about is the price – at just over £1100, it is rather pricey, especially when you compare it to the Rendale.

There's no doubting its obvious power, but is it really worth the extra £570?

Performance	90%
Value	60%

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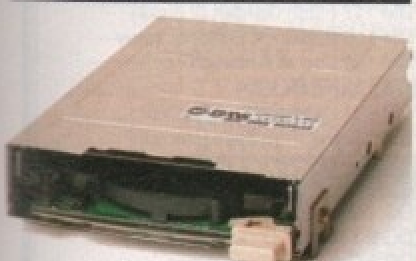
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Packs do not include software unless specifically stated

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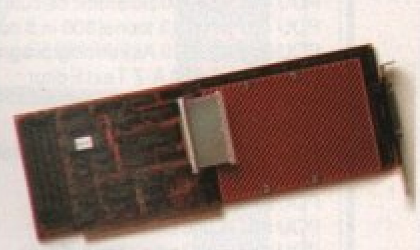
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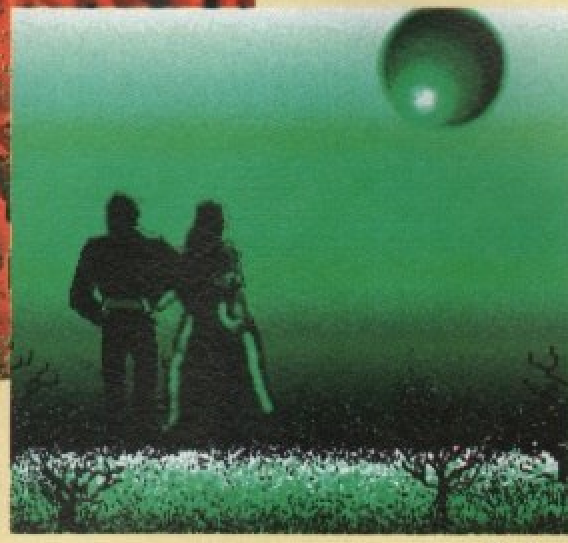
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the Gallery


Mountains


Blue Moon

A really impressive selection of pictures came in this month, so this lot should take some beating.

First of all we have two pictures from a mystery contributor known only as Dope Inc. The two pictures are entitled "Blue Moon" and "Mountains", for obvious reasons.

Tony Donnelly in Northern Ireland has sent us the excellent "Snake" picture and also a distinctly odd creation called "Toi Doi".

Winner this month though, and deservedly so, is Jared Derrett. His two pictures, "Assassin" and "Executioner" are so good that some people actually thought they were screenshots from a game rather than Gallery submissions.

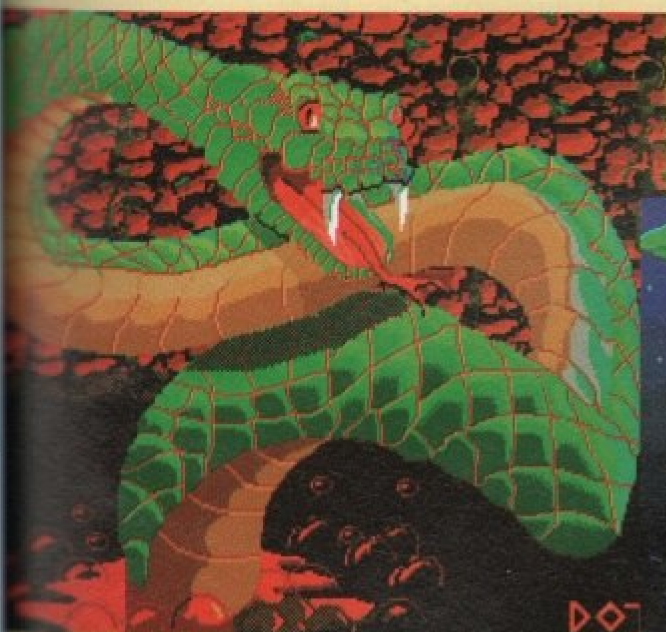
He'll be hearing the creak of the postman's knees as he struggles with a copy of Deluxe Paint IV and a glossy, framed copy of the "Assassin" picture all the way to Essex. The lucky wee scamp.

Can you top that? Perhaps you've got some old digital doodles knocking around at home. If so, stick them on a disk and send 'em in to us at:

The Gallery, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP

You too could grace these hallowed pages and earn yourself the goods. Please remember to include details of how you created your picture(s), plus your name, address, telephone number and what format the picture(s) are in. Good luck!

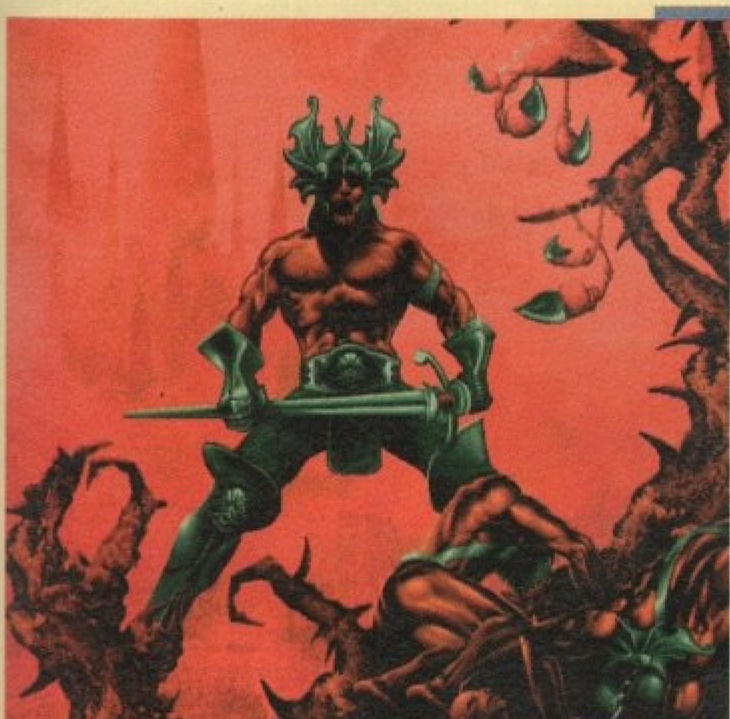
By the way, apparently there's been a delay in sending out some of the glossy pictures, so if you're a past winner who hasn't got theirs yet, then give us a bell on (0625) 878888 and we'll sort it out for you.



Snake

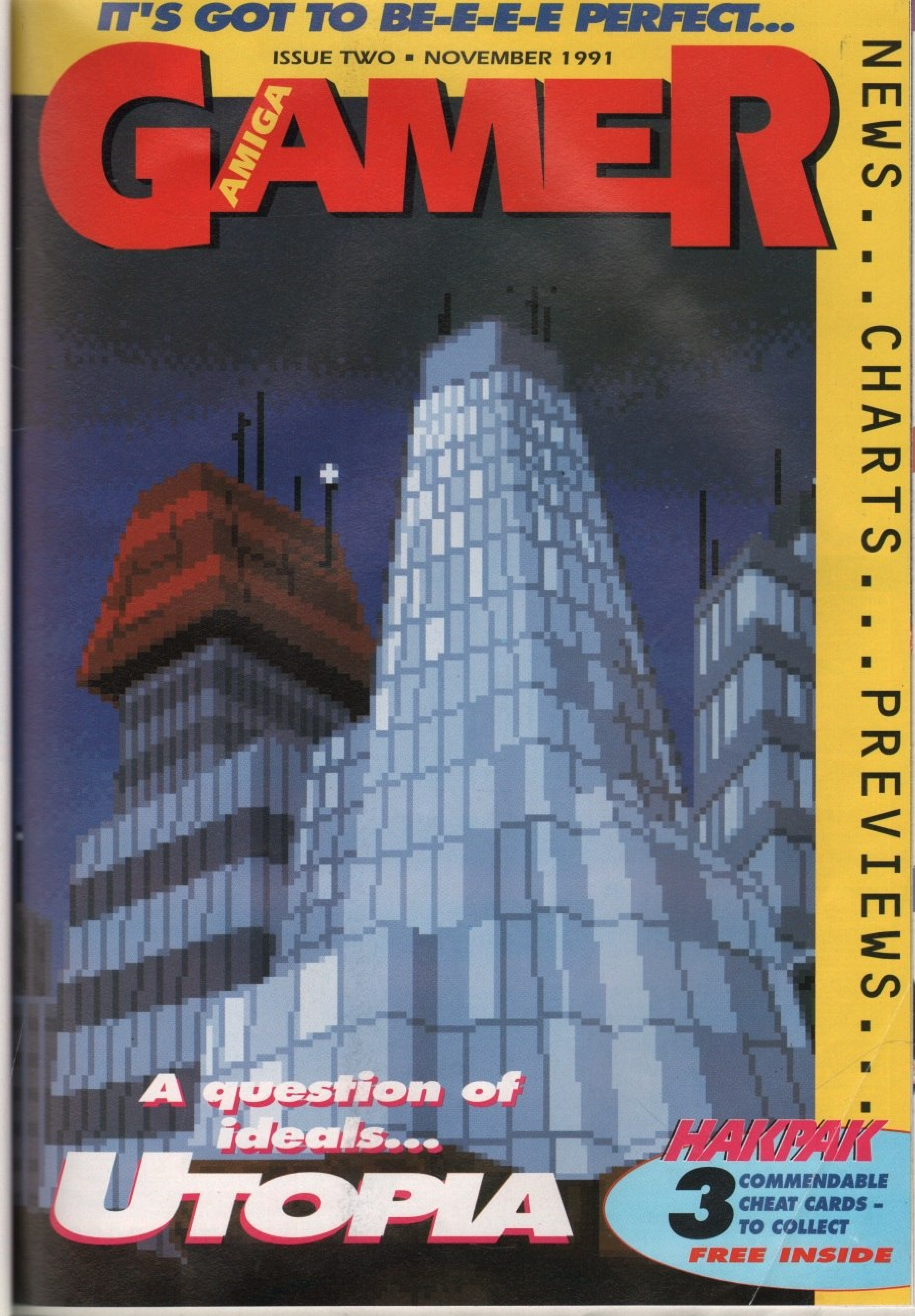


Toi Doi


Executioner



Assissin



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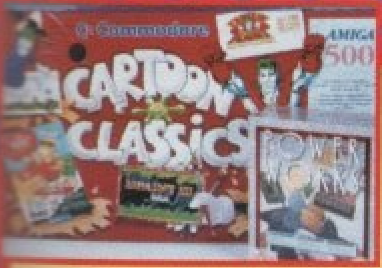
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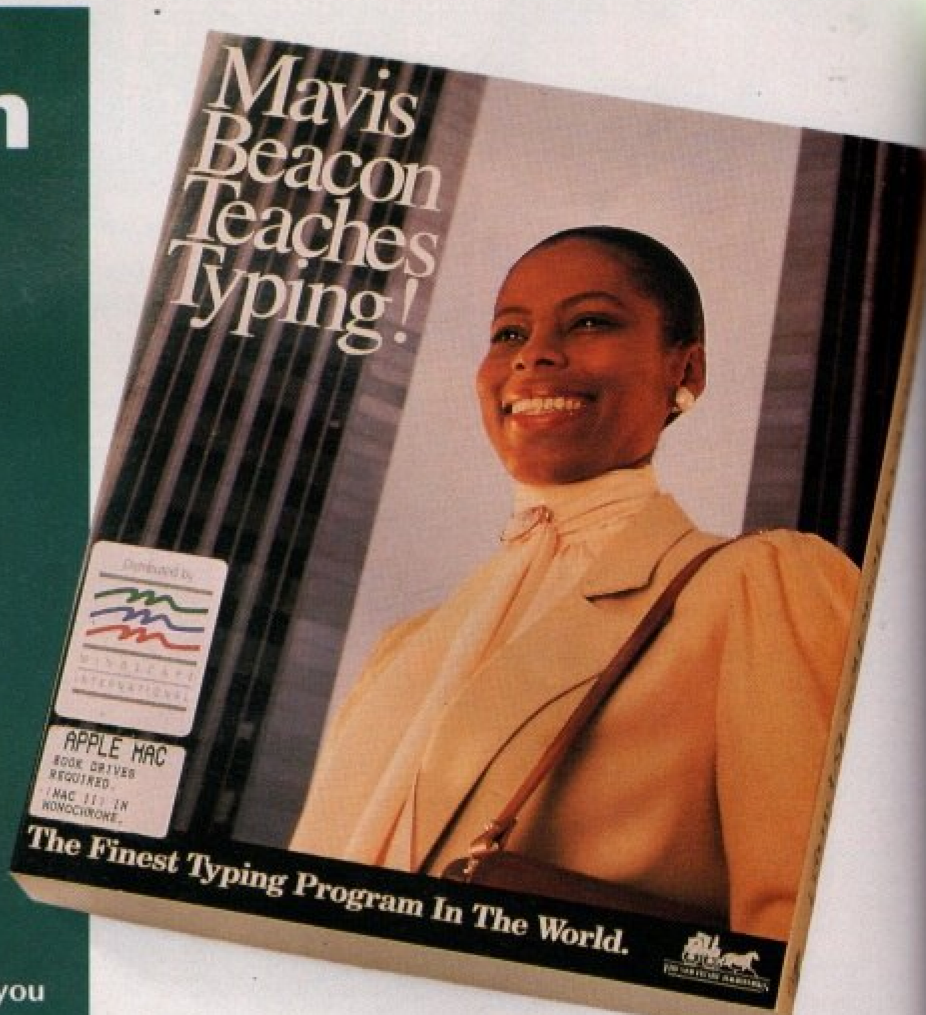
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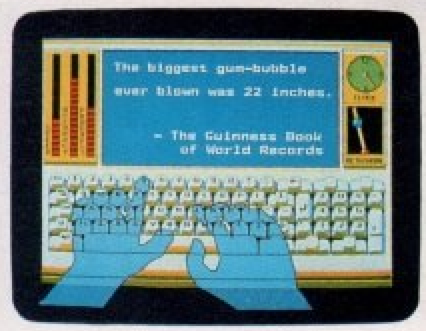
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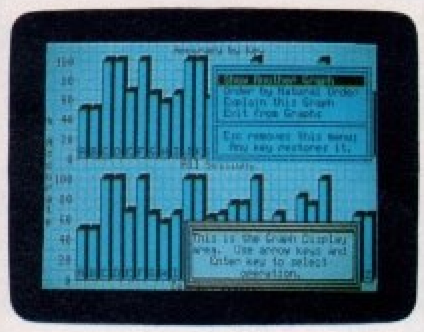
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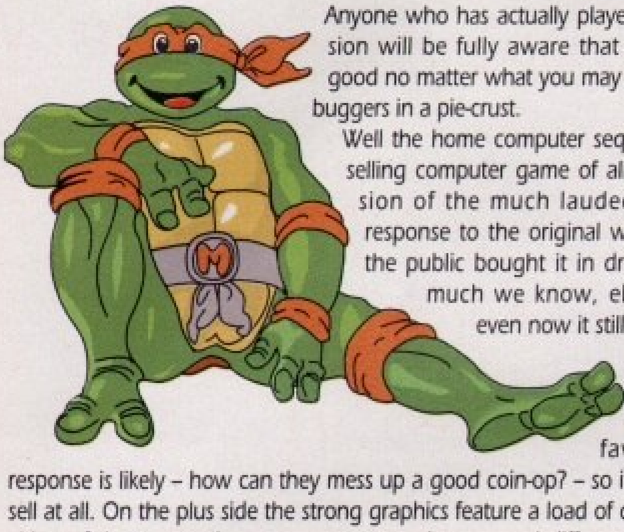


REGULARS

ONword

What's hot and what's not. Gamer spills the beans on the latest from the Amiga games scene

TEENAGE MUTANT HERO TURTLES 2 – Image Works



Anyone who has actually played the coin-op version will be fully aware that it is pretty damn good no matter what you may think of the green buggers in a pie-crust.

Well the home computer sequel to the highest selling computer game of all time is a conversion of the much lauded coin-op. Press response to the original was lukewarm, but the public bought it in droves (shows how much we know, eh punters?), and even now it still hovers in and out of the charts.

This time it looks as though a favourable press response is likely – how can they mess up a good coin-op? – so it will probably not sell at all. On the plus side the strong graphics feature a load of different moves for either of the two turtles on screen at any time, several different enemies and the old adversary Shredder.

This horizontally scrolling beat-'em-up will be released in November. Price TBA.



7 COLOURS – Infogames

It's not a puzzle, it's a strategy! The game area is composed of a large number of multicoloured diamonds, and the objective is to enlarge your territory to over 50 per cent of the total before your opponent, by absorbing the diamonds adjacent to the ones you are currently in possession of. Gradually your territory begins to grow but hopefully faster than your opponent's. Its Russian pedigree promises a highly addictive strategy game for everyone.

Available this November at £19.99.

STAR TREK – Electronic Arts

Trekkies out there will have to hold their breath for a while due to the fact that the 25th Anniversary game of the original TV series is first to be released on the PC. Don't fret however because it will eventually be converted for the Amiga.

The game combines a 3D space flight simulator with a wide variety of role-playing adventures to produce something that should send all the Trekkies into fits of delight.

Plot details are sketchy at the moment, but I am trying to exert some personal pressure to get the programmers to include a sub-game where you have to guess which star is going to turn into the Enterprise during the opening titles, as well as some graphical touches like everyone on the bridge jumping to one side when the Enterprise takes a hit. So far they haven't listened.

Expect it for the Amiga some time in the first half of next year.

FIRST SAMURAI – Image Works

Excuse me a moment while I wet myself. Now I know these previews are meant to be unbiased and containing nothing more than information, but this product really is going to be the dogs you-know-whats. Mind-gibbering graphics and orchestral sound effects combine with brilliant beat-'em-up style gameplay to produce what deserves to be the Christmas number one on merit alone.

The plot puts you in control of a young Samurai who follows the Demon King who murdered his master all the way to Japan in the 24th century in an attempt to avenge the guy's death. Eight way scrolling horizontal action gives the player plenty of scope to use his sword in any direction he wants.

If you get the moves right you can look really stylish by jumping up, getting a bat above you on the way, one across from you while you're at the top and another one below you one the way down. Flash is an understatement.

Due around November at a price TBA.





LEANDER – Psygnosis

Lord Tyeger has kidnapped Princess Lucanna – he can use her to replenish his dwindling power. You play the role of Leander – a handsome hero for the Middle Ages, and only you, wait for it, only you can rescue her. Something to do with a union overtime ban apparently.

This platform based beat-'em-up will feature (deep breath) 22 levels, three different worlds, over 100 enemies, a great intro', loads of unusual potions and pick-ups, password system, weather effects (this comes in the form of a water pistol that your friend can fire at you during the game, possibly), and over 60 different sound effects. It will be available in November at £25.99.


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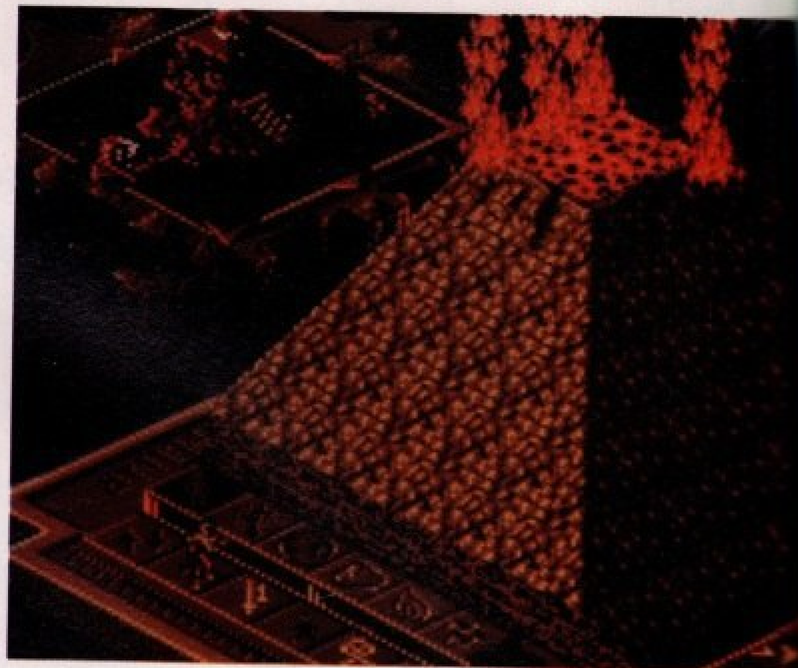
HARD NOVA – Electronic Arts

This PC conversion puts you in the role of Nova, a hard-bitten mercenary who has lost his whole crew in a freak accident involving a meteorite and a pickled onion – probably.

The player must recruit a new crew and travel the anarchic wastes of the four systems finding adventure and danger wherever he goes. Makes him sound like some sort of mad Rupert Bear. The game asks you to hang around in bars to meet and kill people, travel through space and explore planets using the hovership.



It will be available this October at £25.99.



POPULOUS II – Electronic Arts

What can I say? All they've told me is that it's based in ancient Greece, it is new and improved and the graphics look fantastic. That's no bloody use to me is it?

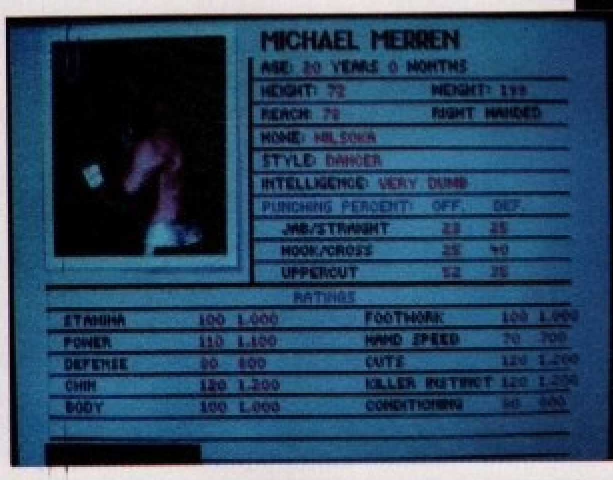
Beyond that it is all highly confidential, but it will be out in December at £29.99.

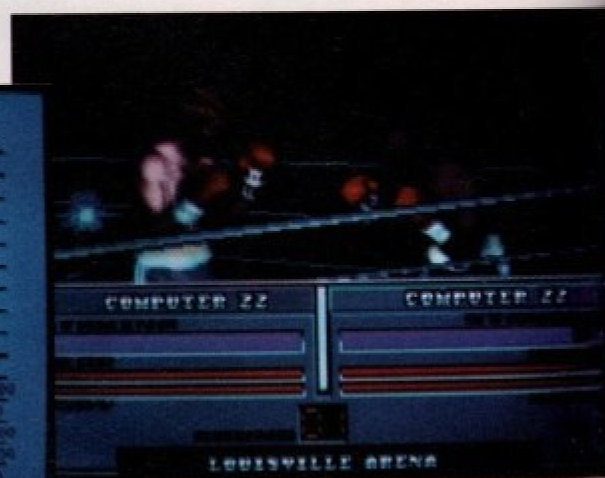
TV SPORTS BOXING – Cinemaware

Following the highly-acclaimed TV Sports Football and Basketball titles, the next sports title moves away from the American theme and onto a more global sport: the bloodthirsty, money-grabbing world of professional boxing.

As well as the high quality graphics and gameplay that Cinemaware have made their own (creep, crawl) the game will also include a full management section where you can shape the careers of talented boxers, force the less talented to take a dive for cash and take a nice juicy cut of all the income to line your own already fat pocket.

This should be with us some time in the next year, again with price TBA.









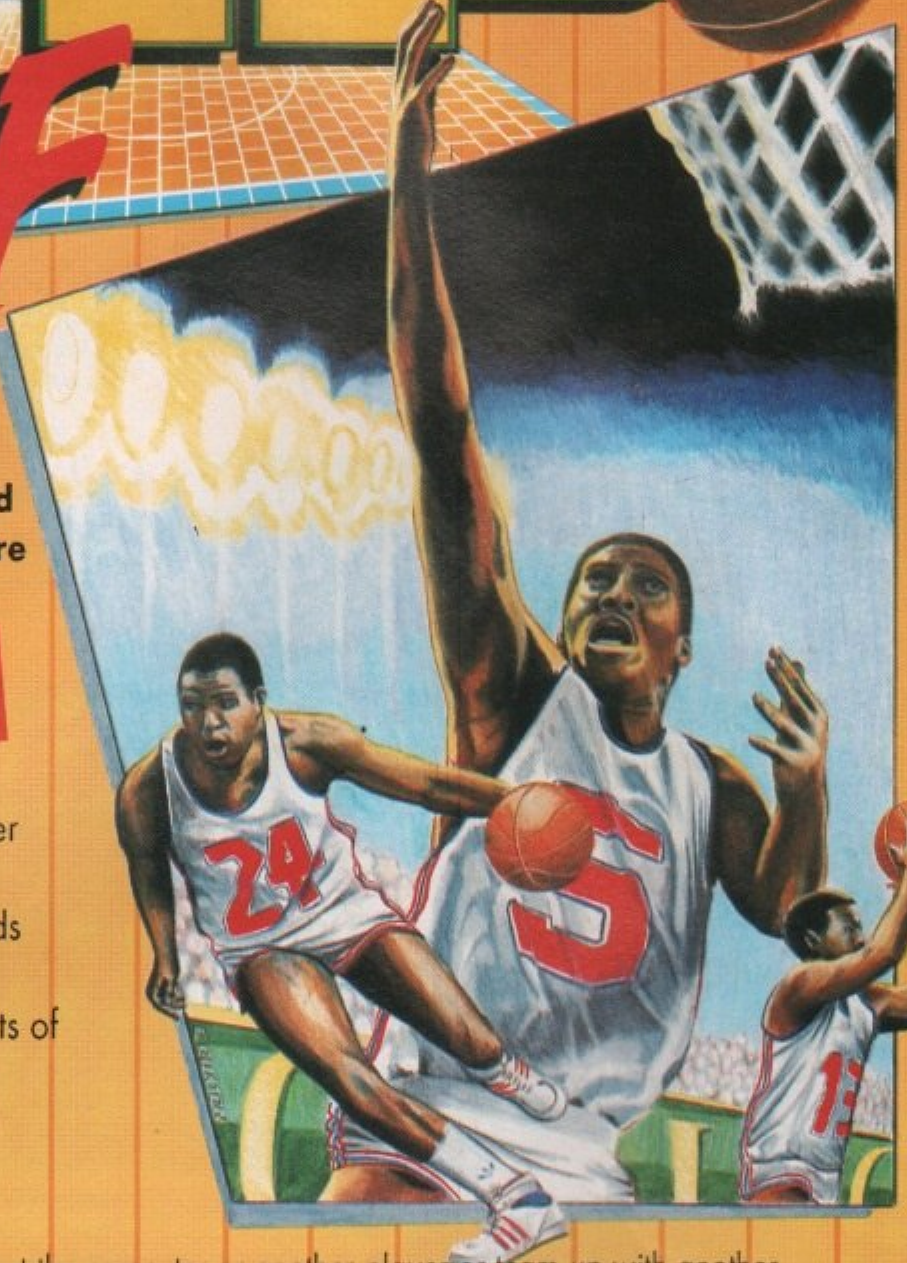
APOCALYPSE – Image Works

Sometime in the near future a jungle scenario reminiscent of Vietnam has reared its ugly head. A guerilla force backed by an eastern power has humiliated a vastly superior army, and the only answer is evacuation.

You are the pilot of the heavily armoured super copter that has the task of picking up the stranded conscripts and airlifting them back to the safety of your forward post. At the moment there is little in the game apart from the helicopter movements and animations but these alone are very impressive, as it it spins around spewing death and destruction in all directions.

When it appears in the new year it should be rather good, if mindless death and destruction is your bag. Price TBA.

TIP OFF



The sheer pace of the game, end to end action and tactical game play is the core of TIP OFF, a basketball simulation -

A SIMULATION WHICH IS GREAT FUN TO PLAY

Players' skills, attributes and fitness together with the astute substitution of players and change of tactics banks by the coach, holds the key to success in basket ball. TIP OFF, therefore includes some managerial aspects of the game. The main features are:-

* Multi directional scrolling screen
* Five skill levels. Skill level of both teams can be set independently.
* 1 to 4 players option. Option to play against the computer or another player or team up with another player against the computer or another player or two players.
* Facility to practice skills and tactics.
* Facility to create a team at all skill levels and design tactics.
* Instinctive Joystick controls to dribble, pass, shoot or do a dummy. There are two running speeds, two types of dribbling and passing and five types of shots at the basket (Jump shot, Hook shot, Skyhook, Running Jump shot and Slam Dunk).
* Each player on the court is an individual with a unique mixture of attributes (Age, Height, Flair, Pace, Stamina and Composure) and skills (Passing, Dribbling, Stealing, Shooting and Jumping).
* Two types of Leagues. Action Replay at 3 speeds.
* Extra moves are available using two independent button joysticks using the EXORLENCE System.

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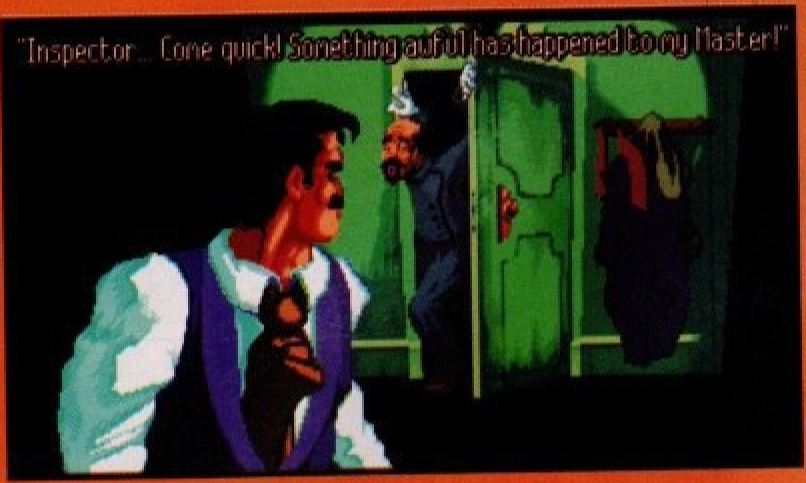
Amiga Screenshot's Shown

EASY TO PLAY - HARD TO MASTER

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The terrible news comes in – Niklos has taken two bottles into the shower



Did you spill my pint?

CRUIS

Hercule Poirot's a decidedly sinister old chappie, isn't he? What with his spooky moustache and his alarming tendency to always crop up near a murder, it's surprising that he hasn't been locked up. And Miss Marple's no better. She may look like a doddery old spinster with a mind like a steel trap, but she probably lures stray cats into her house and turns them into beer-mats for the summer fete.

And what about Lord Peter Whimsey? Or Maigret? No, in my book, all these so-called "detectives" are as dodgy as something, er, very dodgy indeed. Thank the lord, then, that our

quick, if not entirely planned, nap an then gets on with finding the fien who perpetrated the perpetration.

Also on board the ship are a grou of friends and colleagues of Niklos, a of whom have more skeletons in the closets than clothes. It's up to Raoul t corner these suspects and quiz them a the murder. He can also pick up clu from eavesdropping on the others, by inspecting the objects he finds. Ju like that girl in Scooby Doo.

Raoul is moved around the ship w the point and click interface that see to have become a permanent feature this graphic adventure genre. You inte act with the scenery by clicking o

hero, Raoul Dusentier, is a bona fide detective. A fully employed, 100 per cent legit' nosy old sod. A "rozzer" in other words.

Apparently way back in the roaring twenties, Raoul was hunting down some nasty French bloke who was hiding in a restaurant, and rather than let the whippersnapper get away with it, he arrested everybody in the restaurant. Naturally, the highbrow toffs in this up-market chunder palace were a smidgen annoyed by this James Anderton-like behaviour and caused something of a ruckus.

All except for one. A Greek fella called Niklos Karaboudjan stood up for Raoul's "putting the boot in" policy and applauded him for "just doing his job". Freemasonry ahoy, eh chums? Anyway, just to show that there were no hard feelings, Niklos invited Raoul on a luxury cruise. Cruise, eh?

The plot begins to fall into place. All we need now is a corpse. Lo and behold, look what we have here. Poor old Niklos Wotsisname has been murdered at sea. So now we have a cruise and a corpse, which sounds like a perfect place to start the game...

We join Raoul as he discovers the body, just in time to be clobbered over the head by a sinister shadowy figure. Flippin' nora, what a way to start. Anyway, Raoul has a

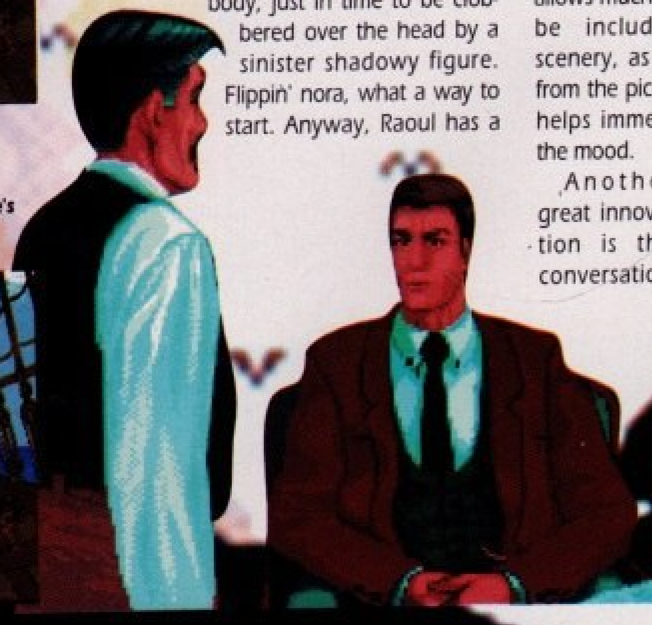
whatever object interests you and, as by magic, a menu appears containing a the actions relevant to that object. Fo instance, click on a book and you coul EXAMINE, TAKE, or READ it. This mean that the number of options is grea increased, as each object can have a action that relates to it, and it alone.

As you can see, Cruise is a bit of stunner. The graphics are bigger and better than any of its rivals, and the ani mation is smooth and sexy, a bit like Galaxy bar. True, it's not the speedie game in the world, but speed isn't wha this game is about. Oh no. It's about, e murder.

Thankfully, the arcade sequence from Operation Stealth have bee dropped. There was nothing mor annoying than having to spend hour ploughing through the adventure, onl to come a cropper because you couldn' handle the arcade bits. So, Cruise for a Corpse is a brain-teaser from top to toe.

As all the action takes place on Niklo ship, the game lacks Stealth's sense o size, but instead concentrates on crea ing the atmosphere of those Agath Christie films, where everyone is a sus pect, and anyone could be the killer. This restricted game area also allows much more detail to be included in the scenery, as you can tell from the piccies, and this helps immensely with the mood.

Another great innovation is the conversation



Rolf Harris' World Of Animation

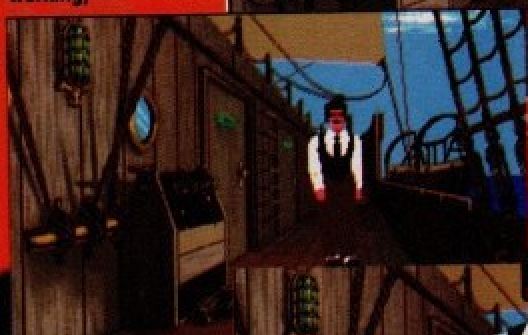
The animation in Cruise for a Corpse is so crisp that we just had to demonstrate it. To help us with this we've enlisted top artist, celebrity and international rock star, Rolf Harris.



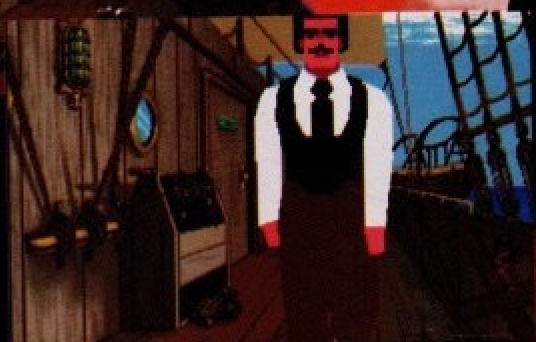
Uhhuhuhu. Can you guess what it is yet? Awoombawumba



Hee hee hee. It's Rolfaroo. Hee hee hee. Ahubbadawubba (Oh dear, this isn't working)

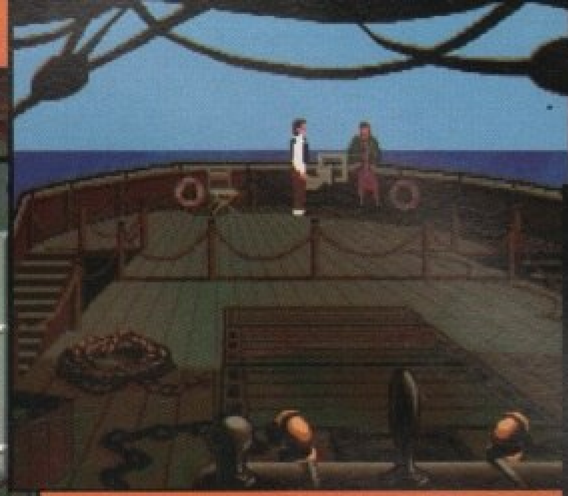


Hoo hoo. Speeeeewoooo. Sun arise, earlee in the mornin'... (I think he's having a "turn")



Hee hee hee. Gibber. Wibble. Tie me Rolfaroo down. Kafwack. (Fetch the nurse, he's lost it this time)





Raoul sits alone with his thoughts...

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Raoul prepares to mosey on over to this saucy chick

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section. Moving on another step from Monkey Island's multiple choice parser, you can now build up a library of subjects to grill your suspects over. For instance, you can talk to Tom and find out a bit about him. Now talk to Suzanne and you have the chance to talk about Tom. She may tell you about Tom's hobbies, and you can then talk about those. This way you can carry out massive discussions and expand your catalogue of questions and clues, uncovering murky secrets along the way.

The whole game is so highly polished that you could stick it to your windscreen and use it as a rear-view mirror. Just try Blu-tacking five floppy disks on to your car and see what I mean. On the other hand, that's probably illegal, so don't try it.

At first, the game seems a little off-putting, as it only takes a short while to walk around the whole ship without getting any clues. Stick with it though, and you'll slowly but surely be drawn in to one of the most intriguing and involving games you're ever likely to play. Once you get the hang of the conversation bits, the game really opens up and you go forward in leaps and bounds.



Raoul stumbles over an early Doctor Who set

There are a few niggles though. Sometimes the actions provided don't seem to suit the object. I found some highly suspicious boxes, but could only EXAMINE them. However, when I clicked on the chairs in the bar I could EXAMINE, INSPECT, PUSH, PULL, RUB, SIT DOWN and TAKE them. Needless to say, most of those options resulted in a reply along the lines of "I can't do that" whereas EXAMINING the boxes told me that, surprise surprise, they were boxes. This can lead to some pretty frustrating investigating, as you really can't afford to pass any options by in case you miss a clue.

Another niggle is the way that almost all the doors seem to be locked, and most of the characters spend a lot of time hiding away in their cabins. You can spend a long time wandering around before you get lucky and meet a new character. Perhaps I'm just impatient.

To counteract these slightly bothersome aspects, there are plenty of options to make life easier. The map, for instance, that allows you to move from place to place without actually having to walk there, or the clock that moves round every time you glean some useful information. The further the clock moves, the more options become open to you.

Also on the "that's a clever idea" side is the well thought out disk system. To cut down on swapping, each area of the ship is confined to one disk. Therefore, you need only swap disks when moving from one deck to another. This helps to keep the continuity flowing and it's a wonder that other adventures haven't used this method in the past.

It's nice to see that the game has plenty of freedom. Despite the number of "off limits" rooms, how you go about your investigating is entirely up to you. This means that progress is made through brainpower rather than trial and error, and is a welcome change.

It really has to be said that Cruise for a Corpse is a stonker of a game. It's brilliantly written, and just like the Agatha Christie novels it was inspired by, it forces you to stick around to the finish to find out whodunnit. Entertaining, exciting and, er, ambidextrous.

Daniel Whitehead

VISION — GGGG
Large, smooth sprites that actually get bigger as they get nearer, and detailed backdrops.

AUDIO — GGG
Some brilliant creaking ship noises, and cheery big band jazz music.

PLAYABILITY — GGGG
A formidable game at first, but the rewards for persevering are great.

ADDICTION — GGGG
There's no way you can give up without finding out who the killer is.

93%

GAMER GOLD

face2face

Paul Rigby parachutes behind enemy lines to gather intelligence on the biggest flight simulator ever

Birds of Prey, produced by Argonaut and distributed via Electronic Arts, has had a rather long gestation period, not to mention a name change. Originally to be known as Hawk, this flight simulation appears to have taken forever to hit the shelves.

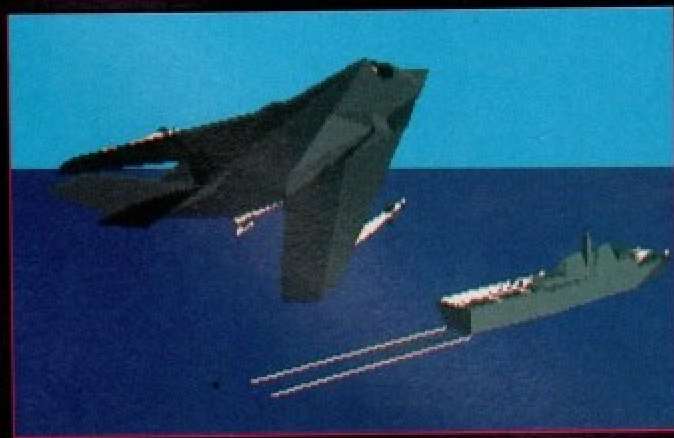
The reason is, apparently, a simple matter of a protracted development period. No one really knew what they wanted so ideas were bounced around until someone saluted it - playing havoc with their metaphors.

At the time of writing, Birds of Prey is scheduled for release around November. To placate you should you desperately require some information to get through to the final release day, allow Chris Humphries, designer and writer on the project, to offer a few words of wisdom.

The most obvious first question being - what is Birds of Prey, Chris?

"It is a combat flight simulator which allows you to fly 40 different types of aircraft on 12 different types of mission in a fictitious world consisting of airbases and aircraft carriers, cities, roads, rivers, that kind of thing."

"It allows you to choose what-



ever type of mission you'd like to fly – bombing, air interception, air superiority, tank busting, etc. You can also choose what type of aircraft you want to do it in. Although we try to help people to choose an appropriate aircraft it is up to them to make their own choice. They can then load up whatever weapons they think are appropriate and then go off and do it."

Fictitious it may be but is there a real background scenario?

"Not really. Although the aircraft featured are real it doesn't involve real countries. There are just two sides. You choose which side you want to be on and you then fight on that side. You try and tip the balance of power by your human element."

"The game can almost run by itself, where both sides make attacks on each other. You try and assist your side to give them the edge."

This game is not just a simple matter of completing a list of missions. There are a variety of dynamic elements included. This is because you will be taking part in a fully fledged battle. So, while you are hitting enemy aircraft and bases your he

GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GA

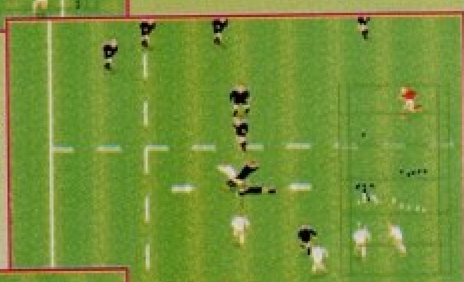
Join the club and pull down your trousers, its...

WORLD CLASS RUGBY

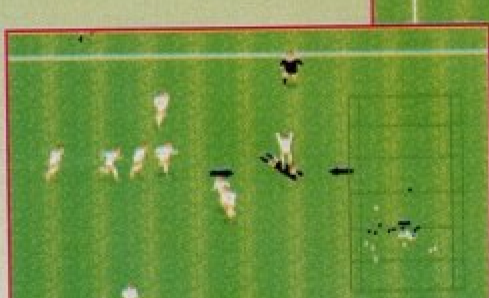
AUDIOGENIC • £25.99 • 1/2 meg • Joystick • Out now



Victims of a police baton charge, the players run for their lives



The overhead view is easiest to get used to but you can't see much of the pitch



The "radar map" on the right of the screen can be changed to which three sizes suit best

World Class Rugby. Hmmm, sounds a bit like World Cup Rugby if you ask me. And, my word if it isn't the Rugby World Cup this month, well knock me down with a feather and call me Susan if that isn't one of the most remarkable coincidences this century. And bugger me if there isn't another rugby game reviewed next month. How do I know? I'm psychic that's how.

Rugby to the uninitiated is a complex game – hundreds of rules make up the sport, covering every possible situation. But it isn't really necessary to know more than the basics if you want to play or watch a game.

This version, by all accounts, tries to take in all of the basics and some of the more complex ones, but to include every single rule and couple it with the infallible logic of a computer would mean that you might as well start carving a headstone for playability right now. Fortunately you don't have to.

The match can be a friendly, in the league, then the League Cup or the World Cup. The four options give you the opportunity to play loads of opponents in all sorts of environments, and the chance to fight your way to the top in three very different arenas.

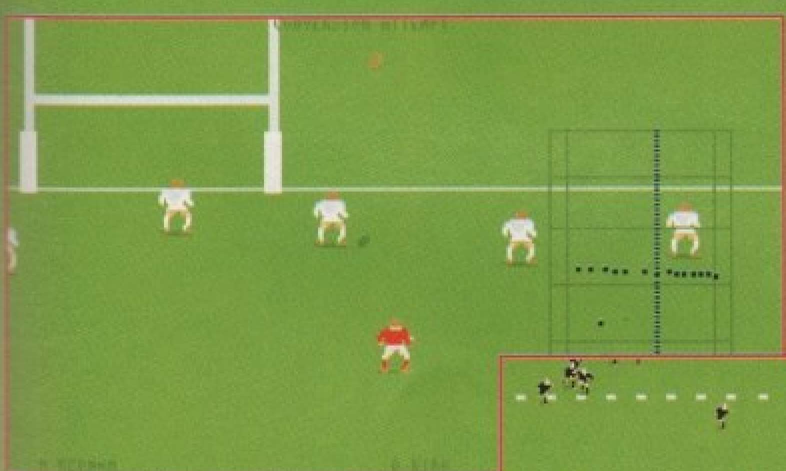
On the pitch at any one time you will have fifteen men – eight forwards and seven backs – the forwards being the ones who make up the scrum. The idea is basically to run up the field with an oval ball, get it behind the goal and touch it down. The problem is that you cannot pass it forward – it must always be passed to someone behind.

This sort of sport involves heavy contact which may mean that the ball gets trapped under a pile of men and the game effectively grinds to a halt. This is where the scrum comes in, or if someone was at fault, various penalties. The scrum, or the ruck when the game hasn't been stopped, involve a large group of men being punched forward by the waggling of your joystick. Coloured arrows show the position of the ball and whether you are in control of it. If the ball goes out of play you ge

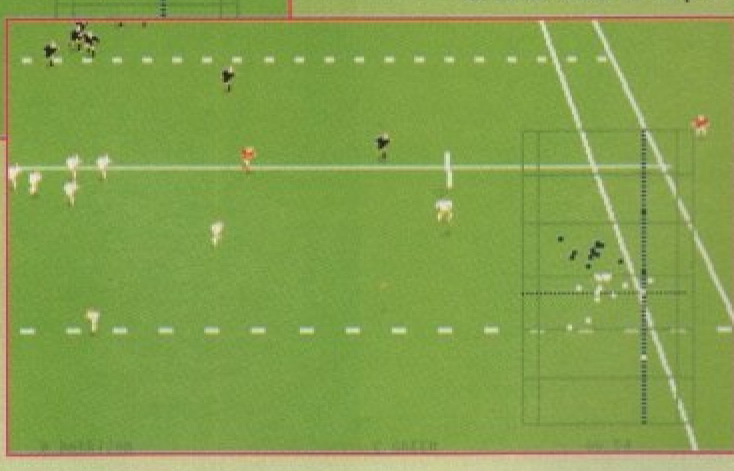


These chaps from Argonaut in gratuitous game name pun type photo opportunity

GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER



Behind the goal looking up the pitch we watch the conversion attempt fail



The pseudo 3D allows you to see all the moves on the pitch

a line-out. This set piece gives you the chance to pick one of the seven or eight routines available which, if you gain possession, will be run by the computer in a similar way to some American Football games.

The ball can be kicked forward down the pitch but it must not be picked up by anyone other than the kicker or one of the opposition.

The most complex rules included in this version revolve around offsides and knock ons. In the full game these rules cause the majority of the hold-ups, which is why rugby is given such liberal advantage rules.

Advantage is a difficult concept to get over to a computer in the way a referee would interpret it which is why the offside and knock on rules can be turned off if you fancy a really fast moving game. But when they are on it doesn't make the game completely unplayable, just a little bit more pedestrian.

Controls are very simple. Depending on the situation, fire will either change the controlled player, pass, tackle or kick. Dead easy. The pitch is viewed from either above or, a pseudo 3D that is identical to that of John Madden's on the Mega Drive, and it plays like a dream.

There is plenty of scope in computer rugby for the aforementioned headstone but Denton Designs have managed to produce a highly playable game that should do for computerised rugby what Kick Off did for football.

Jools

VISION (3/5)
Simple sprites but a tad boring.

AUDIO (3/5)
Reasonable groans and crunches during play.

PLAYABILITY (4/5)
Fast moving and great in two player mode.

ADDICTION (4/5)
Rolling around with men has never been so attractive.

80%

face2face

Continued



A heavily laden A-10 A climbs into the sky from a secret airbase

➤ low combatants will be engaged in tank battles, tactical fire fights, artillery bombardments, and any other offensive action you find in an all out war.

You never see this action. However, each side's progress can be monitored via a series of reports and graphs. These graphs, percentages and status reports illustrate a variety of positions such as hangers, control towers etc. It is rather more tricky to find exact details of the enemy but there is a reconnaissance (recce) mission you can fly to find out what state the war is in.

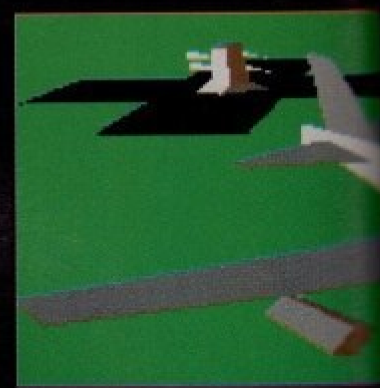
The action you take part in is totally dynamic. For example, visual damage can be inflicted upon an installation. However, that damage will then be repaired over the course of time. If you knock out a hangar you effectively knock out all of the aircraft for a particular base. If you knock out a control centre you neutralise their control ability. If you attack aircraft-producing factories you will knock out their ability to produce new aircraft. The replacement rate drops while the factory is being repaired. You must try, therefore, to win a war of attrition.

As mentioned above, the "dynamics" do not extend to other ground elements. You do not see your side rolling forth with tanks and men, for example. Birds of Prey (BOP) is more orientated around air combat. There are elements of ground attack but they generally include air-related targets.

If you "die" you do not lose the game – you just take a different persona to continue the sam ongoing battle. Nothing chang after your "death". You can al save the battle at that point if y wish. In fact, because of the Sa routine you can have a number campaigns running simultan ously. The only item lost is th dead pilot's record.

It is possible to lose an aircr and live (such as safe ejectio However, one pilot is not allow to lose too many aircraft, the li being four aircraft on the easi level dwindling down to one the most difficult level. So even a pilot survives an ejection, if h has used his allotted quota of a craft, he will be grounded. A ne pilot will have to be created.

Intriguingly, you can al



A massive B52 overflies a friendly SAM installation on its way to deal death an destruction to the enemy



The eyes in the Teepee might gibe some info if you ask the right questions via this screen



Inscrutable, Japaneese and bald



Death is not a pleasant option. Remember, that is not a football bouncing down the hill

Help your(s)elf



OCEAN • £25.99 • 1/2 meg • Joystick • Out now

Where would the computer games industry be if your average boyfriend type chap behaved like he should, kept an eye on his girlfriend and didn't let her get kidnapped?

Lost, that's where it would be. There are more games that revolve around the idea of some guy racing around on the metaphorical white charger in an attempt to rescue his bird, sorry girl, from a fate worse than a night in the company of John Major.

But then it is a classic ideal, a romantic notion that every bloke who gets his girls nicked by someone in a dragon suit is going to chase after her. Lets be honest, if that sort of thing happened today, no fancy dress party would ever be the same again.

This kind of dilemma is what faces Cornelius, the hero of Ocean's fairy tale beat-'em-up. You must control Cornelius as he attempts the rescue of his dearly beloved Elisa, who has been abducted by Necrilous the Not Very Nice.

Now I went out with a girl called Elisa once (no, straight up), and if it was my Elisa that had been kidnapped I would have paid the bugger to keep her, not attempt to get her back. Then it would have been straight off down the local cattle market of a nightclub to pick up some other gold-digging little whore that fancied my money. Bitter? Me? Oh no! Poor old Cornelius, under your control has the happy task of fighting his way through eight tortuous levels of ruins, forests, swamps, and Christ knows what else before you even get a sniff of Necrilous' BO or the chance to take him on in the ultimate showdown, the final conflict etc, etc.

Along your way you will be able to col lect various items which you can use on their own or as bargaining tools in the shop to buy some really useful things like health to restore your depleted energy, chain-mail to stop the energy being depleted so quickly or



A Harrier preparing for take off on a carrier.

defect! If you destroy a friendly target it is assumed that you have defected. If you defect twice neither side will have you so your pilot is, again, grounded.

During the game you will be allowed to choose a variety of different bases. The choice has an affect on the gameplay. Chris:

"It affects the enemy's ability to attack you because each one has a different set of defences and different strengths in terms of where it is and how far it is from the enemy lines."

Consequently, the mission selection is slightly altered,

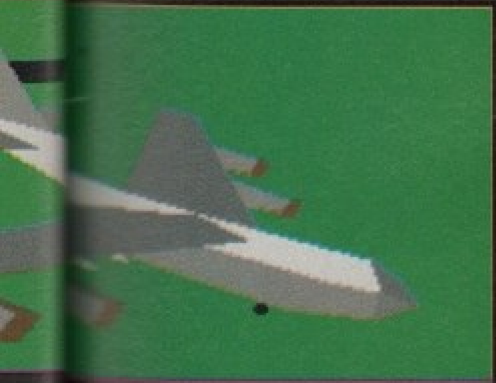
"...in a sense that if you select an aircraft carrier there are certain missions you obviously can't do – certain aircraft can't fly off an aircraft carrier! That's the only restriction."

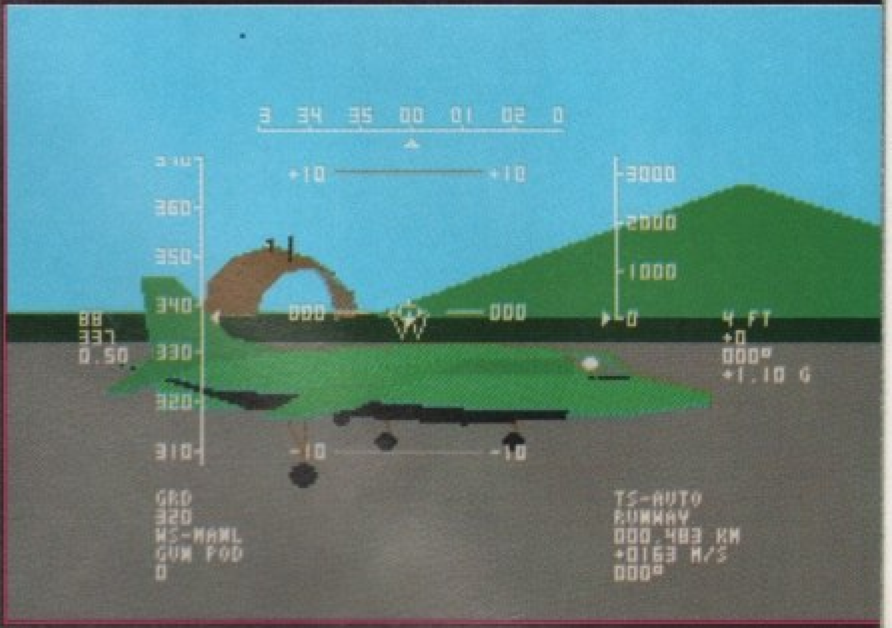
Another restriction is that there is only one generic cockpit:

"To design a cockpit as detailed as we have done would be very difficult to do again and again for different aircraft and have all the artwork stored. We'd end up with three of four more disks just to contain it."

So there are 40 aircraft within BOP. I guess that many readers will be wondering just how flexible the aircraft choice is. Let Chris explain:

"You can choose any aircraft for any mission but it does pose restrictions sometimes. Where it is very silly to try and take a 747 off an aircraft carrier, for example, but, yes, you could take a Jumbo Jet on an air interception. You'd probably get shot down, though, unless you were very careful or your wing men do all the fighting but you wouldn't get any points for that. The war would be fought and you risk your home base being destroyed and it doesn't look too good on your record."





The complex and realistic HUD overlayed on the outside view of ytour aircraft

Speaking of which, how are the wing men implemented?

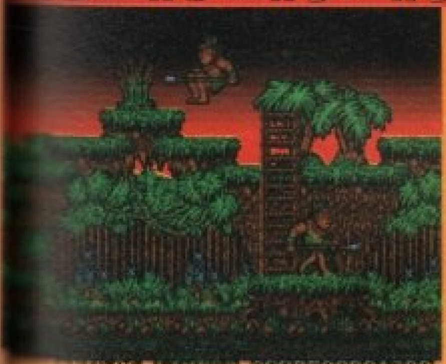
"They will fight for you and when you're on a bombing mission they will protect you. You don't communicate with them but you know what they are going to do in any given situation."

Wing men are nice – pity there is no possibility of radio messages or interaction, though.

What about the enemy's artificial intelligence (AI)?

"For AI, the enemy has a general purpose algorithm which allows them to taxi and take off, lock on to targets, choose the most appropriate target and so on. They will always choose an air target over a ground target even ➤

GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER



Elf watches in awe at the Annual Spear Vaulting championship Po-ki-nass

advice to make sure you are going the right way. All of these items and the other weapons that can also be bought can only be obtained if the correct selection of items has been picked up through the levels.

The items are made up of eight different herbs and pets. The herbs range from Stinking Toadflax (mmmm) to Spiny Nutwert (sounds painful) or from Purple Berry Grump to Brown Horse Floot, all of which sound anything but pleasant to the nose. The pets are these rather charming little creatures that lie around the level just begging to be picked up in the same manner as some of the girls at that disco I mentioned.

One of the really nice features is the Cuteness Rating. This is an index figure that shows how many cute characters you have shot during the course of the game. As far as I am concerned the more the better.

This eight-way scrolling platform/shoot-'em-up/exploration type thingy is one of those actually quite good non-licenced products that Ocean have been known to chuck out every once in a while. It is really good fun with loads of little puzzles that should keep the most hardened platformer going for ages.

Jools

VISION
G G G G
Stylish scenery and great detail.

AUDIO
G G G G
Effects make for a good atmosphere.

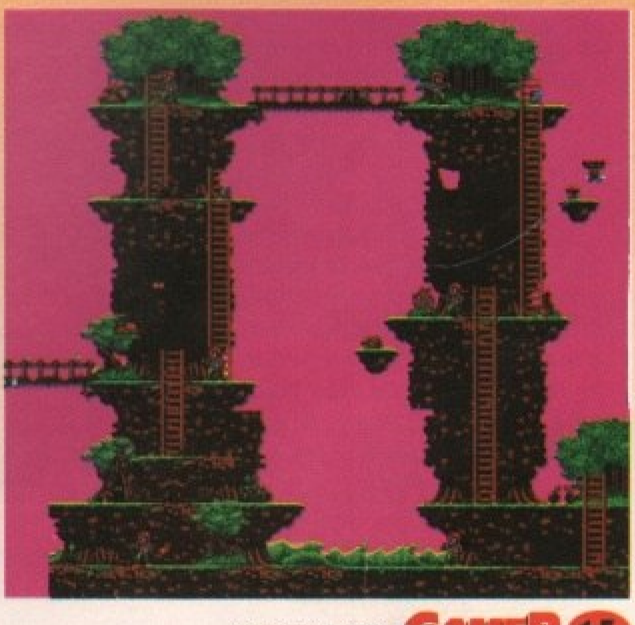
PLAYABILITY
G G G G
Miles to explore and loads to shoot at.

ADDICTION
G G G G
Fast action keeps you coming back for more.

82%



The quest to find Capt. Birdseye (top right) is nearly over



That "difficult" first level in full

face2face

Continued



VTOL from the HMS Invincible

➤ if they've been given a ground target as their main mission because that represents the greatest threat. They can only launch missiles that that particular aircraft type carries. In dogfight situations they vary their manoeuvring based on what you're doing, to a certain extent."

Although Birds of Prey is far down the line regarding development there are many tactical elements that have still to be decided. For example, Chris was still to decide whether you should be allowed to attack city areas to affect morale/factory manpower and so on. So extra features may appear – or disappear! – in the final version that have not been mentioned within this article.

Release will be Amiga first. There are slight worries, on my part, regarding the basic Amiga 500 version, though. As simulations increase in complexity the frame rate plays havoc with the gameplay. How has this problem been tackled?

"We have a completely selectable range of detail - so it will be a trade off between graphic detail and speed. BOP has also been debugged on an Amiga 3000, by the way. It steams along at about 30 to 40 frames a second! We think it is the fastest Amiga 3000 program that you can get at the moment. All velocities and acceleration are independent of the frame rate, however. So you don't experience an unplayable game. As far as sound goes, the Amiga has very nice stereo effects – produced by Giles Goddard – which include doppler shift effects."

Doppler shift effects are sound special effects that give you that distinctive "Wwwhhooooosssshhh!" sound of a missile approaching, zipping past, and careering



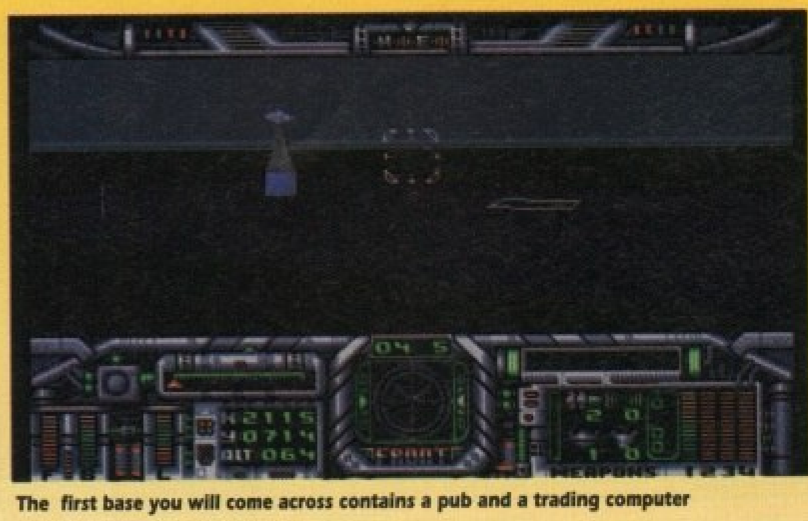
I don't care how Stealthy it is, no-one on that ship is going to miss that plane

GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER GAMER

I hope I break my leg...

MOONFALL

21st CENTURY ENTERTAINMENT £25.99 1/2 meg
Mouse/keyboard Out now



The first base you will come across contains a pub and a trading computer

Midway through the 21st century, man has finally mastered the technology required for travel to, and colonisation of, distant planets. The first starship, Daedalus I, set off in the year 2052 heading for Wolf 359, a small red star some 8.1 years away from Earth.

As the scientists arrived some generations later they discovered that the dual star solar system was entirely devoid of planets. There was no more in that solar system than a large number of asteroid belts. On closer inspection it appeared that among the asteroids there flew thousands of tiny craft, automatically controlled mining vessels. It seems the previous colonists has destroyed all the planets so that they could mine more efficiently.

Daedalus I headed for the only lump of rock bigger than an asteroid but smaller than a planet, a moon that no longer had a planet to orbit. This moon, christened Frontier Alfa, was inhabited by a race of independent, capitalist and unscrupulous robots and their creators the Remusians. The Remusians were small bug-eyed humanoids who took a much less active role in the colony than the Roboforms.

The Earth starship was soon captured by the Remusians, who enslaved the human habitants. Some of them escaped capture however, and established a small colony of their own. They set you up as a trader, with the ultimate aim of making enough profit to be able to buy the whole colony and become supreme leader, thereby being able to free the enslaved humans.

This 3D vector graphics–based games combines violence and trading on a planet's surface, in the classic formula that was pioneered by Elite in deep space. In Moonfall though, the gameplay is more regimented than the random nature of other games.

Ten missions lie in wait for you, ten objectives that must be completed very successfully so that the maximum gain is made from each, whether it be a reward for capturing an outlaw, or



The trading room has been admired far and wide for its simplicity

profit for some shrewd trading.

Outlaws are something of problem. They are all too keen on trying to hijack your cargo and possibly your ship. The reason the moon attracts so many outlaws is that the Roboforms don't care what they buy and sell, immoral, amoral or just plain dirty. If it presents a chance to make a profit they will go for it. The majority of the missions consist of some reasonably derring-do type

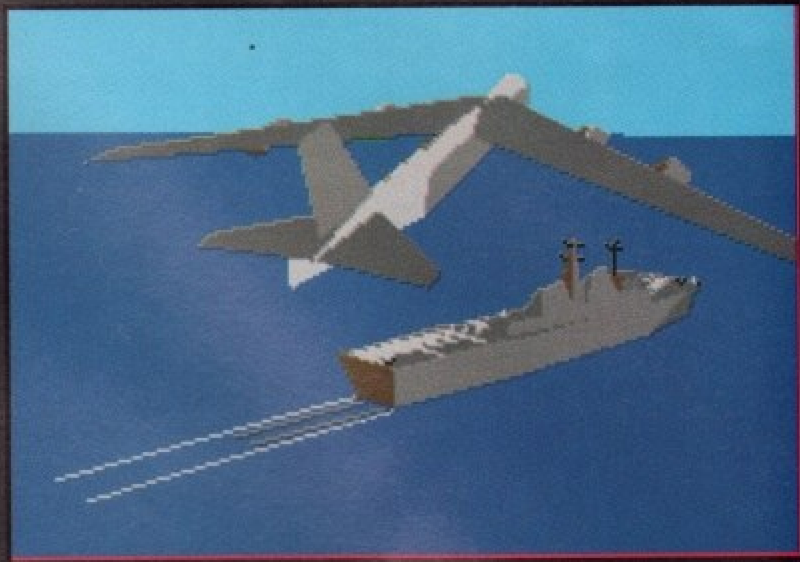
off into the distance.

Birds of Prey appears to offer a nice blend of variety, choice, excitement and attention to detail. Check out the bottom line during the full game review in your super soaraway Amiga Computing - coming soon!

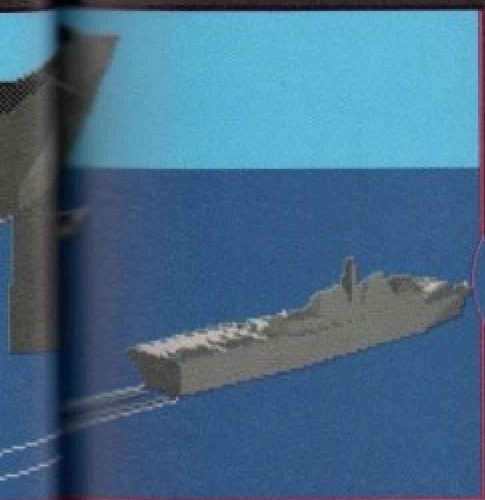
Terrain

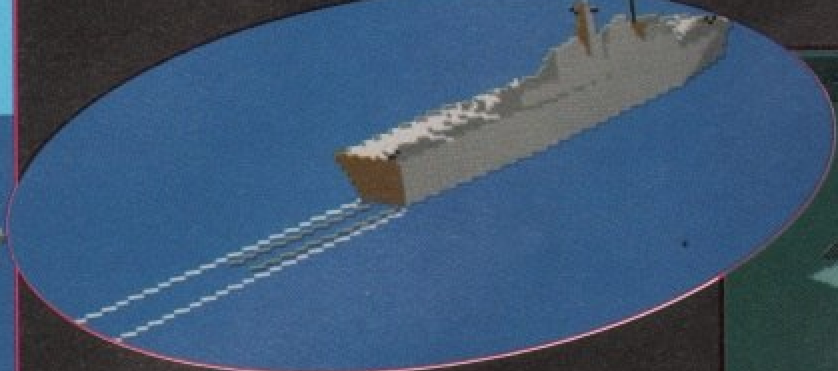
As well as using waypoints to avoid radars, you can also use terrain. Mountains are such large and important features in this game that Argonaut has implemented very accurate collision detection for these features.

This means that you will be able to hug/skim the terrain at low level. In fact you can also fly down canyons, land on skyscrapers and on top of hangers with the Harrier! Populated areas are, largely, patches with darkness. However, there are skyscrapers. One welcome aesthetic feature is that cities light up at night.



This by now familiar ship is paid a visit by the B52 we saw earlier





The graphics may well be simple but there is so much else going on that complex graphics would slow it down



Notice how the Stealth fighter cunningly blends in with its background. They don't call it Stealth for nothing

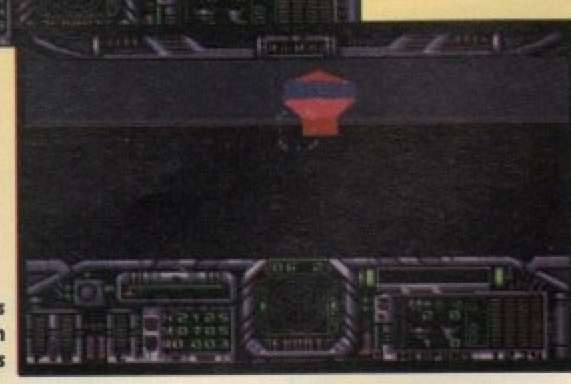
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The good looking chap will be happy to take your orders



A map, however naff, is always useful



The landscape is littered with such fascinating objects

stuff – rescuing hostages, meeting avengers from a crime organisation, all sorts of stuff. But the trading remains the bread and butter of the gameplay.

Gameplay is the main problem with this game. There is far too much long distance flying involved as you travel from city to city, base to base, with nothing of interest in-between save for loads of stone pinnacles. Trading is slow and laborious and if you do occasionally happen across another vessel and try to engage in battle it turns into a stand off.

Just facing each other and shooting is hardly the most enjoyable shoot out I've ever seen. The simplicity of the vector graphics is forgivable if they have been deliberately sacrificed for speed, but sadly this is not the case.

Speed seems to have been sacrificed for something else, but I'll eat my horse if anyone ever finds exactly what it is. The landscapes are drap and boring and the interiors of the bases are drab beyond belief. You enter the "pub" to glean some info but it looks just like every other room – only when you logon to the computer do you get asked for a drink, in a separate interfacing screen. Surely a sprite-based sequence would have been better than an empty room with a computer at the far end?

Moonfall is essentially a wasted idea. The theory behind it is good but it is so poorly implemented that it just does not bear thinking about. But if you are in the mood for something restful this may be the one to consider. Did I say restful? I think I meant sleep inducing.

Jools

VISION – GGG
Overly simplistic 3D graphics.

AUDIO – GG
Poor effects but it shouldn't matter too much.

PLAYABILITY – GG
Long slack periods punctuated by longer, slacker periods.

ADDICTION – G
Paying £26 would make it addictive for a while.

45%

talking **shop**

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GALLUP CHART

Compiled exclusively for GAMER

Last month's top four are still in the top five, the group as a whole slipping one place, with the budget priced TV Sports Football and Full Contact swapping places within that group. They've been dislodged by Thunderhawk, Core Design's helicopter simulator/ shoot-'em-up. Its success is hardly surprising following a plethora of awards from the press and an advertising spend of over £20,000 (gulp).

Apart from that this month has been fairly boring – everything has remained fairly stable. Gods and Lemmings have continued dropping, Eye of the Beholder and F-15 II are still hanging in there and Hero Quest has disappeared altogether. Next month, though, should see the arrival of the first of the scenario disks in the charts and they should drag the parent product back in there with them.

One of the greatest shoot-'em-ups of all time, Blood Money, is there at number 24 on the budget label Sizzlers. I fully expect this to climb steadily for a few months once people catch on to what a stunning game it really is.

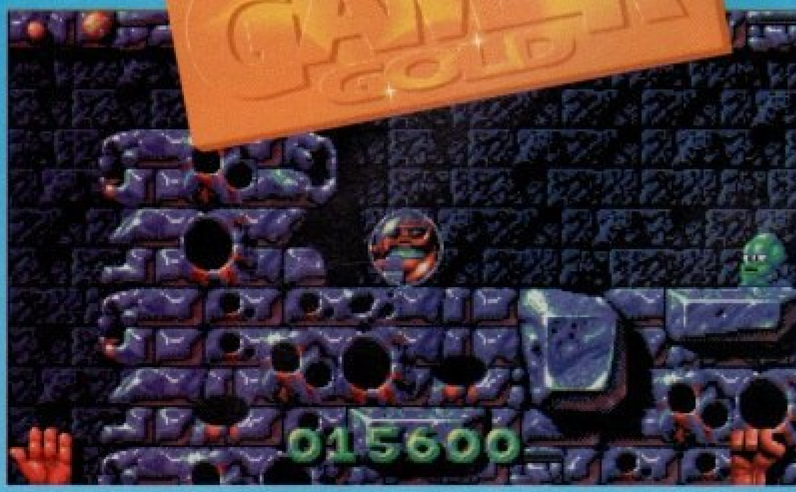
Shock of the month, I don't think, has got to be the fact that Kick Off: Winning Tactics is still hanging in there. Apparently the ex-richest man in the country, the Duke of Westminster, came


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Have a rumma

MAGIC

RENEGADE • £25.9



Pleeeease release me, let me go! The Bitmap Kid gets trapped by the killer bubble that appears if you loiter too long



The Kid's just trapped a snail in one of his trouser tornados. If he pops it, he'll get a pressie



Look before you leap. A TV will crop up every now and then to show you what to expect



He's found his bike, so now it's time for a quick race to the exit

Pockets, eh? What bloomin' marvellous little fellas they are. Why, if it weren't for pockets then the fabric of our society would fall to pieces. Kangaroos would be pretty useless without pockets, and snooker players would be scuppered as well. Just imagine: a world without kangaroos or snooker.

Oh. Not so bad is it? So pockets aren't really that wonderful are they? In fact, they're not worth bothering with at all. So, enough banter, let's get on and check out the latest Bitmap offering.

It would appear that I'm not the only person to have problems of a pocket nature. The Bitmap Kid is having trouser receptacle bothers as well. You see, Bitty has been blessed with, yes you guessed it, Magic Pockets.

Just what's magic about them? Well, they're big. Very big. Magically big in fact. Just like the Tardis, the Kid's pockets are a lot bigger on the inside than they would at first appear.

As well as having pockets that defy the laws of physics, they also have an equally spooky ability to provide the Kid with whatever objects he desires. For example, if he's lounging in the sun and he feels a tad thirsty, he plunges his hand into his pocket and produces a refreshing, cool can of Fizzy Trendy Pop drink. Great, eh?

Of course, there's a downside to all this pantaloon japery. It would appear that the Kid has accidentally lost four of his favourite toys dans la poche and now he wants them back. And what better way to do this than to whip a black hole out of his kecks and leap in after his beloved playthings?

Well, he could just pop down to Toys R Us and buy some new ones. No? Please yourselves. Once inside his trousers – calm down at the back – he finds himself in a world totally unlik[e] any he has ever known. A world popu[-] lated by strange beasts and bizarr[e] landmarks.

It's Ashton under Lyne on a Saturda[y] night! Except it's not, it's four levels o[f] scrolling platform action played over 3[?] separate sub-sections, with one to[y] located on each level. And so we com[e] to The Game.

Yes, it's a Bitmap Brothers concoc[-] tion, and yes it's flaming marvellous. A[s] with Gods, the bruvs have taken the standard platform formula and added a little twist to make it a completely diffe[r-] ent game from every other platformer.

A lot of the innovations found in Gods crop up here too, albeit in a slightly bigger way, but we'll get to that later. First of all, before we get into all the complicated bits, let's take a shufty at how the game looks as a platformer.

The screen layout will be familiar to anyone who's played a platform game – and let's face it, that's practically everyone. You have the main character, complete with a springy wee jump, some platforms to jump on to, some bogeymen to try and stop him, and an exit at the end of the level.

That's where the similarities end. The Bitmap Kid can fight back with a variety of weapons from his infamous pockets. On level one, he fires whirlwinds, level two brings clouds, the third level has ice blocks and the final level has snowballs.

Like R-Type, he can fire at double strength by holding down the fire button that little bit longer. This unleashes an extra large whirlwind/cloud/ice block/snowball which will trap the nasties, Rainbow Islands-style.

These extra strength power ups also have a second purpose, depending on which level you are on. For instance, on level one the whirlwinds can be used to fling the Kid all over the screen, allowing him to reach higher platforms. A sprinkling of tactical planning will be required to puzzle your way out of certain situations, so don't disengage your brain when you pick up the joystick.

The sub-levels within each main one are designed so that no two levels will play alike. Some require you to navigate mazes of interlinked platforms, others demand quick reflexes, and others call upon puzzle solving skills.

At the end of each main level, there is a bonus one which involves using the toy you retrieved from that level in some sort of test. These range from the relatively normal, such as a bike race, to the positively bizarre: try a boxing match with a gorilla.

All of these little touches help to keep the game fresh and exciting by chang-





Once you've retrieved your lost boxing glove, you must use it in a fight to the death

Deep in the jungle, the chimps can't find David Attenborough so they're bothering the Kid instead



The third level takes you to the lakes, where you must freeze the water to cross. But if you had a diving helmet...



Aaargh! It's The Snowman! That pathetic little egg is trying to reach me but can't quite make it 'cos he's a weed

VISION GGGG
Uncluttered, smooth scrolling screens packed with zillions of weird and wonderful sprites.

AUDIO GGGG
Whether or not you're a Betty Boo fan, the music is great, plus some nifty little speech FX.

PLAYABILITY GGGG
Plenty of new touches ensure that this is a platform game like no other.

ADDICTION GGGG
Each level is designed to teach you a new aspect, so you'll be drawn in like fluff to a cough sweet.

90%

...in the Bitmap's pockets

POCKETS

1/2 meg • Joystick • Out now

ing the formula every time you play. And that's it more or less. There are more "little touches" than you could shake a very large stick at, but you'll just have to take my word for it.

As you can see from the screenshots, the graphics are excellent. There are literally hundreds of sprites, and thousands of rooms – or so the Bitmaps claim, but who's counting? – all of them laden with detail. Each of the four levels represents a different environment and the screens change to reflect this. From underground caverns to snow covered mountain peaks, via the jungle and the lakes, the graphics remain at the highest standard.

The boring techy stuff like animation and scrolling is brilliant as well in case you were interested. You probably could have guessed that though.

Soundwise too, things are as hot 'n spicy as those bits they put on pizzas to burn your mouth when you least expect it. The music is provided by that stormin' rap vixen, Betty Boo.

Perhaps it's a bit of a shame that just as the game was being completed, Ms Boo got booed off stage for miming, but that's the way the cookie crumbles. Whether or not you're a Boo fan, the music is great and suits the game perfectly.

Thankfully you only hear that cheery "Doing the Do" refrain at the end of each level, otherwise there could be a lot of unnecessary violence committed against innocent loudspeakers. In game we are treated to some equally well suited FX, with little voices going "Yeah" when you get a power-up and so forth. And it's all very, well... bouncy really.

OK, now comes the bit where we find out just what the Bitmaps have done to make the game different. Remember in Gods how some of the nasties were intelligent? Well, the same applies in Pockets, except that now we have many different grades of nasty.

Some are passive and won't harm you unless you actually walk into them, others are aggressive and pelt after you the minute they spot you, while some of them are really vicious and will attack from off screen and follow you everywhere you go.

Some of the baddies are weak and can't get over the obstacles in your way, and some are even better at jumping than you and can scale even the most daunting walls. This system means that you'll never be able to waltz through Pockets just because you know when to expect the enemy. Pretty damn clever, huh?

Another new Bitmap invention is the gradeable power-up. By killing nasties you can decide what power-ups you get when you trap a nasty. The more nasties you kill, the better the power-up when you trap and burst your next foe. Cunning or what? This isn't just a gimmick either, as later levels require you to plan carefully what power-ups you'll use and when – if you're to stand a cat in hell's chance of finishing it.

That, in the space allowed, is as much of the game as I can tell you about. Suffice it to say that I didn't have room to tell you about the secret rooms full of bonuses, the fun reward bits when you're totally invincible and can just leap about killing things, the ability to kill nasties by tumbling on to them, the TV sets that give you a sneak preview of what's around the next corner, the bubble gum machines that allow you to float up to platforms, the plants that can be watered to grow into new platforms and the assorted helmets that give you all manner of special powers. Phew!

Yep, Magic Pockets is a big, big game and one that should keep most people glued to their joysticks for weeks on end. Those Bitmaps have done it again. What next? A Bitmap beat-'em-up with an S-Xpress soundtrack? We can but dream...



Hubba hubba! A quick chew of gum and the Kid can float to the parts other sprites cannot reach. Eeek! except the bats

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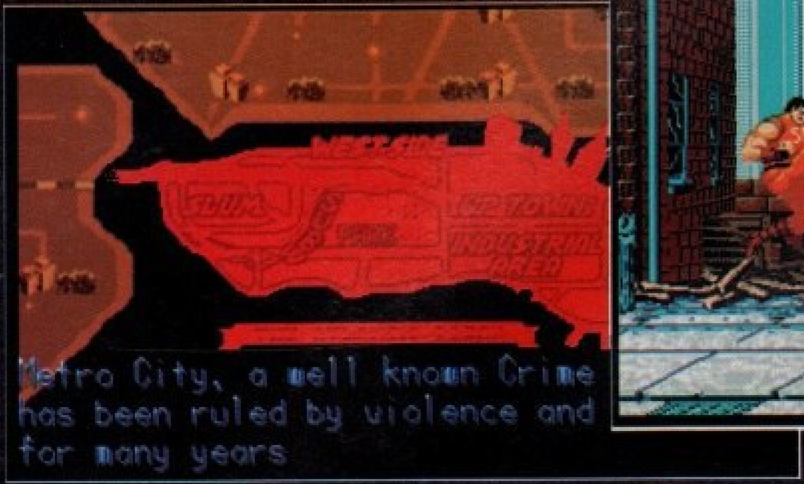
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Welcome to Metro City. Not a nice place to live, but great for beating people up



In a brief respite, the lads practise their modern dance routine in the hope of appearing with Bonnie Langford



Guy and Cody get stuck in right at the start of level one



The darts players from Hell attack in a gut busting charge. A couple of slaps in the face and they topple over though



The "big" end of level nasty. Just keep punching him to win. Tactics or what?

Metro City has gone a bit downhill. Only a bit, mind you. It used to be plagued by crime and corruption. Those foolhardy souls who dared walk the streets at night got mugged, then the muggers got robbed, then the robbers got beaten up, and so it went on.

Decent folk moved away, and come to think of it, the indecent folk moved away as well. Nope, Metro City really was a pretty nasty place to be.

Then the Mad Gear Gang arrived...

Cursed with the most pathetic gang name since "The Jets" in West Side Story they vented their rage against the paralysed city. They terrified people with their close harmony renditions of Leonard Bernstein songs and bribed the mayor to allow them to carry out their nefarious deeds without recrimination.

Let's face it, they took the place over. Then the mayor mysteriously vanished, and the city looked for a new hero to rid them of the Mad Gears. This hero came in the imposing shape of Mike Haggar.

Haggar, quite handily, happened to be an ex-wrestler and street fighter (as well as having a wonderful singing voice and a penchant for Shakespearean verse).

He refused to bow down to the Mad Gears' offers of bribery and corruption, so they kidnapped his lovely daughter, Jessica.

"What a drag", thinks Haggar, "Still, sounds like an excuse to walk the streets and kick the hell out of everyone I meet." And that's exactly what he does.

Meanwhile, over in the gym, Guy and Cody are discussing the pros and cons of having immensely stereotyped butch yankee names when the phone rings. "Jessica's been kidnapped," says Cody in a blinding flash of lateral thinking, "My sweetheart since childhood," he adds to clarify what little plot there is. "She's my friend too," pipes up Guy, feeling a little left out, 'cos he's fancied Jessica for ages and only ever kissed her once (when she was drunk at the annual Street Fighters Xmas Ball).

By a blinding stroke of luck, Guy and Cody are more than a little adept at the old martial arts. Yes, Guy and Cody just happen to be a couple of black belt ninja types, which is just as well 'cos otherwise they'd heads kicked in, wouldn't they? So, pausing only to style their hair, they set off to join Haggar for a relaxing spot of urban violence.

It's here that you come in. You must take control of one of the three heroes, or two of them if you can con your mate into joining in, and guide them through 19 (very short) levels of highly predictable beat-'em-up action.

Their noble quest will take them from the filthy back streets of Metro City, through the subway, into a wrestling ring (for some inexplicable reason) and every other typical setting for a beat-'em-up before they reach Jessica.

Unfortunately, they also reach the bloke responsible, if not downright guilty, for lumbering the Mad Gears with such a duff name. 'Tis the Mad Gear ganglord, a sinister geezer in a wheelchair with a harpoon gun.

The first thing to strike you about Final Fight is the graphics. They're massive, and colourful to boot, and are pretty much identical to the coin-op. The enemy are varied and look really mean. The backgrounds are also nicely rendered, although there is no way to interact with them by swinging from lamp posts and climbing on crates and so forth.

The animation on the characters is surprisingly fluid but with several big sprites on screen they start to slow down. However, the game's biggest plus is also its undoing. The sprites are so big that they mean any real control over the action is point-





One of the most original points in the game. A tube train arrives on time. Ho Ho Ho



For some reason we find ourselves in a wrestling ring with a man called Sodom. Nuff said



Here they are. The obligatory scantily clad women to be beaten up



Haggar gets a bit bored with beating up the bad guys and decides to wipe that sulky look off Cody's face. Hurrah for Haggar!

Why pay the ransom when you can have the...

FINAL FIGHT

US GOLD ▪ £24.95 ▪ 1/2 meg ▪ Joystick ▪ Out now

less. Once the action starts all the baddies crowd around you and the only way to get out is to just frantically punch and kick in all directions.

One flying kick and you can take down everyone in your path. Even the biggest baddies are a cinch to beat, with little or no tactics required. This means that on your first go you'll probably play most of the game, if not complete it. Ho hum.

Putting that gripe aside for the moment, the sound is pretty well executed with the arcade music playing over the now essential opening storyboard. The effects are OK, but to be honest, they're just too derivative. You get the standard thump and crunch noises whenever anything gets hit.

The subway section offers some respite with a great reproduction of a train noise clacking away in the background, but apart from that there's nothing new. It would have been nice to hear the swishing of the lead pipe as you swing it, or some speech dotted about but, alas, it was not to be. Technically speaking it's a major achievement. The graphics are excellent and the sounds are well above average for this sort of game, but there's just no challenge whatsoever when playing it.

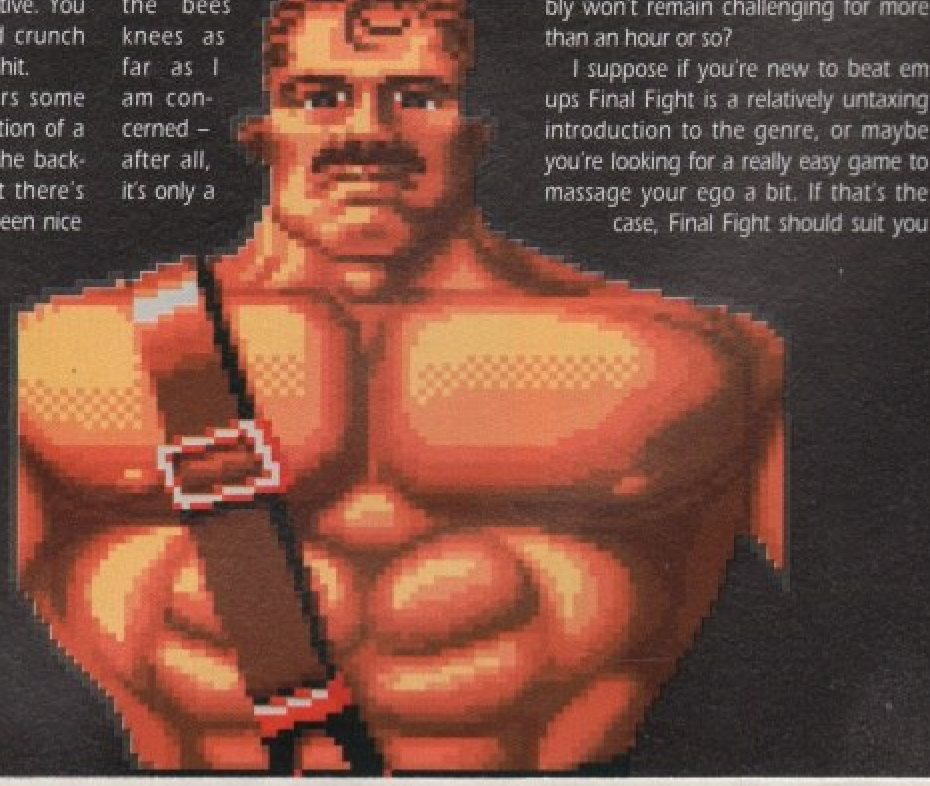
OK, now all the macho men reading can skip this bit as it probably won't apply to you, but for the more sensitive among you there's also the question of morals. Don't get me wrong, beat-'em-ups are fine by me. Target Renegade on the humble Speccy was the bees knees as far as I am concerned – after all, it's only a game, right? But a game where you have to beat up women with lead pipes, vandalise cars and assault cripples may just be stepping over the mark slightly. It's up to you whether or not this bothers you, but some may find the indiscriminate brutality a little startling. Just thought I'd warn you, being the caring, 90s kind of guy that I am.

Getting back to my major grumble though, it's just so easy! It shouldn't take your average gamesplayer longer than an evening to play the game from start to finish.

Correct me if I'm wrong, but isn't 25 nicker a bit steep for a game that probably won't remain challenging for more than an hour or so?

I suppose if you're new to beat em ups Final Fight is a relatively untaxing introduction to the genre, or maybe you're looking for a really easy game to massage your ego a bit. If that's the case, Final Fight should suit you down to the ground, but I think most people would be happier with something with a bit more wallop to it. Rent a couple of Jean Claude Van Damme movies instead. They're cheaper, just as violent, and they'll probably last longer as well.

Daniel Whitehead



VISION – 4/5
The sprites are huge and very close to the arcade. Visually, Final Fight is a treat.

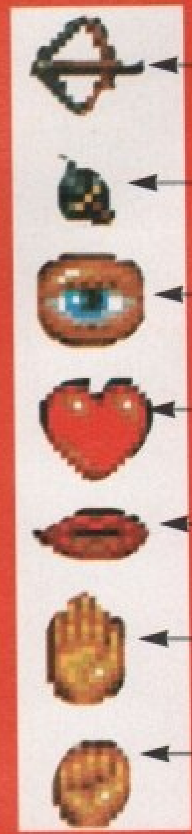
AUDIO – 3/5
Typical beat-'em-up FX and a neat rendition of the coin-op music.

PLAYABILITY – 2/5
The almost pathetically easy gameplay means that boredom soon sets in.

ADDICTION – 2/5
Good fun in the short term, but Final Fight has the long term appeal of a dead haddock.

65%

To assist you in your green stockinged gallavanting, Gamer now presents the guide to gorgeous icons



BOW AND ARROW
Oddly enough, this will make Robin fire an arrow in the direction he is facing,.

SWORD
Click on this and then on a person and Robin will lay into them with his chopper (fnar).

EYE
This scrolls the screen a little further in the direction Robin is facing, to allow you to see what lies ahead.

HEART
For some reason this induces Robin to break into a run. Perhaps All Bran would be more appropriate?

LIPS
Click on this and then on person and Robin will tickle them with his silver tongue (ahem).

OPEN HAND
The "Be nice" icon, click on this, then a person and Robin will be nice to them

CLOSE HAND
The "Spill my pint" icon. Clicking on this and a person makes Robin threaten them

You may not have noticed, but Robin Hood is pretty hot property these days. A few years ago he was just a bloke who wore green leg warmers and a stupid hat in some distant age, remembered only in songs sung by bearded men in real ale pubs with Aran sweaters and fishermens' smocks, then suddenly he was transformed overnight into an international film star and all round celeb'.

All I can say is that it's a good thing that Robin Hood looked like Kevin Costner, or they'd have had to get someone else for the film, and then where would he be?

Needless to say, this game has nothing to do with "Prince of Thieves", although there is a competition to win the video included with the game, but is instead based on the Olde English legends that spawned the original Robyn o' the Hoode. So don't expect to find Hollywood style stunts and chases, like the film. That's not to say that the game is without action, but it's action of a more sedate kind.

The game places you in the slightly sweaty tunic of Monsieur Hood, and asks that you merely elevate him to level of International Folk Hero. Ho ho ho. That should be easy, thought I, I'll just clobber some Normans, snog Marian and be home in time for a slap-up meal of dead stag. Oh boy, was I wrong. Let's take my first game as an example.

I started off happily enough, sat in my castle having a good old knees up with the Sherwood Posse. Then the Sheriff of Nottingham booted me out and made me an outlaw. I hung around for a bit thinking it might be some massive medieval Jeremy Beadle type prank, but 'twas not.

So, there I was. An outlaw. So I shot a few arrows around, got into a fight with a soldier and died. Not really an auspicious start for the Champion of the Oppressed, eh? What had gone wrong?

My first impressions of Robin Hood were "Look's like loads of fun, but what the hell am I supposed to do?". The instructions don't give anything away, merely telling you that there are many ways to end the game, some are failures, others are minor successes, or you could go the whole hog and kill the Sheriff, get the girl and save the world.

My first few endings were of the "complete and utter failure" type, with the peasants sniggering at me and calling me names. After a bit of experimentation though, I started to get the hang of it. I met Maid Marian (and even managed to snog her), I joined forces with Will Scarlet and even killed the Sheriff with a lucky arrow. Then I got beaten up by loads of soldiers and died. But it was too late, I was hooked.

Control of Robin is carried out via mouse and icons, in a manner similar to PowerMonger. You select the action you want and then click on the person or object you wish to act upon. It's a tried and tested formula, and it works quite well. There are times, however, when it can cause trouble. For instance, you have to click on two icons to run away from a soldier when he takes you prisoner, and by the time you've done that you could well be dead. There's also a rather odd feature that means that sometimes Robin ignores what you ask him to do and does what he wants instead. This means that you can't afford to leave him alone in case he strolls off to get himself killed while you make a cuppa.

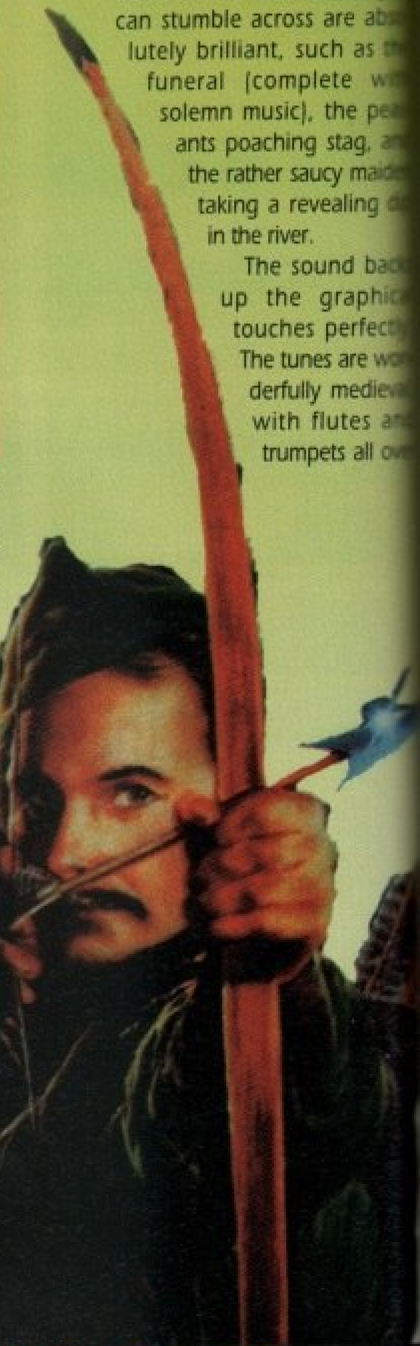
The icons available are your basic "fight", "talk", "walk" variety, although other magical icons can be collected. Magic? Yup, magic. In this Robin Hood tale, the forces of Herne the Forest God are in play to give you magic rings and crystals to help you on your way. Another decidedly un-Robin icon is the "fireball" which can b[…] obtained from a dragon (?) to allow y[…] to strike your enemy down with f[…] Very handy for getting rid of the N[…] mans, that one.

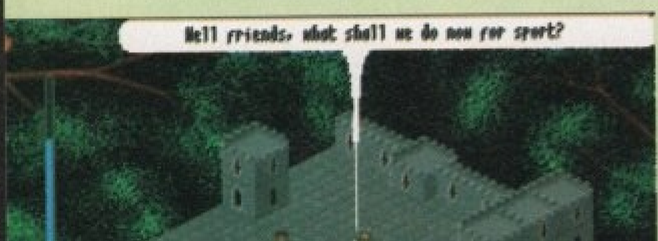
The graphics are a bit on the t[…] side, and Robin often blends in with t[…] green backgrounds, but the lack of s[…] means that there's plenty of memory l[…] for those cute little touches that ma[…] these sort of games special.

The people in this game are […] independent. Each lives th[…] own life, and you can watch the[…] do it.

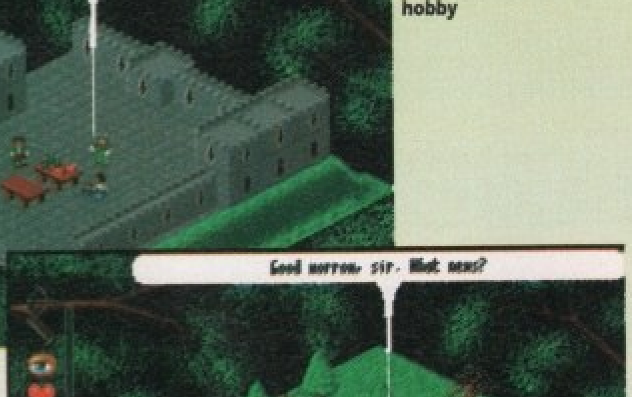
Some of the little scenes y[…] can stumble across are ab[…] lutely brilliant, such as t[…] funeral (complete w[…] solemn music), the pe[…] ants poaching stag, a[…] the rather saucy maid[…] taking a revealing d[…] in the river.

The sound bac[…] up the graphic[…] touches perfect[…] The tunes are wo[…] derfully mediev[…] with flutes a[…] trumpets all ov[…]

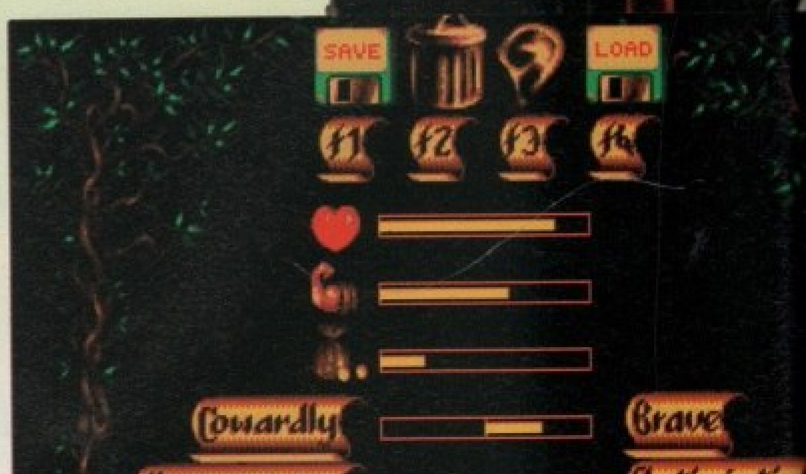




Tired of playing "Catch The Giblets", the Merry Men look for a new hobby



Some of Robin's best friends were trees you know



A look at the status screen reveals that Robin's a bit of a villain at the moment



Can Robin actually think that Marian will fall for this drivel?



An Englishman's home is his castle, at least until the Sheriff nicks it off you

He's bold, he's brave, he's very, very good. He's

ROBIN HOOD

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the shop, and there are plenty of them. Try having a chat with the Minstrel and seeing if he'll do requests! The sound effects are great too, if a little thin on the ground. The church bells and castle trumpets are especially worth a mention as they give you hints as to what's going on in other parts of the land.

Don't think that this is a one man job though. To survive in Sherwood you'll need to make plenty of friends, and keep the peasants on your side. Giving them money is a good way to boost your popularity, but you'll have to pinch it off the rich first. Somewhere along the line, you'll have to try and gather the Merry Men together as well. As a bit of clue, I'll tell you that Will Scarlet can be found about to be hung at the castle gates. All you have to do is rescue the fella and he'll join up with you. As to where the others are, I haven't got the foggiest. I think I've spotted Friar Tuck trundling around, but I can't get him to join me. That's one of the strengths of this game. There's no lack of things to do. There will always be someone to talk to or fight with, the question is which do you do, and to which people?

The game is not without its problems. As I said before, controlling Robin is sometimes a chore, especially when he decides to do his own thing and tries to sneak back into his castle. Another sticky patch comes when you try and use your fabled longbow. As we all know, Robin was the Jockey Wilson of his time, but the forced perspective makes it hard to see what lies in your path and what doesn't.

Twice I managed to cold bloodedly murder some of my supposed friends, just because I couldn't see where I was firing.

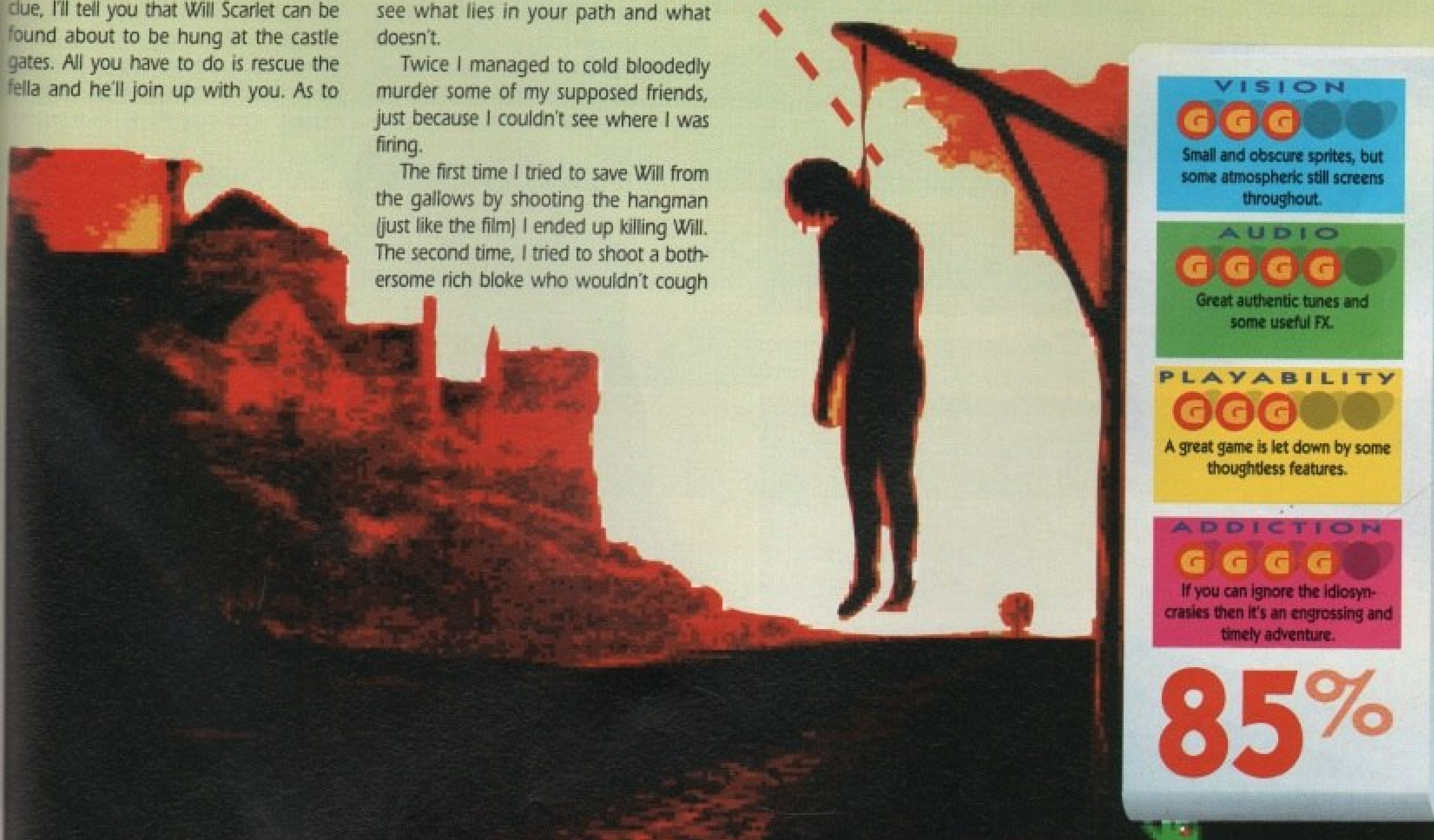
The first time I tried to save Will from the gallows by shooting the hangman (just like the film) I ended up killing Will. The second time, I tried to shoot a bothersome rich bloke who wouldn't cough up his cash before he legged it into the castle, but my arrow missed by miles and killed Maid Marian as she stepped out for a morning stroll. I was gutted I can tell you.

While I'm in a niggly mood, just a quick moan about the stupid way that icons become unusable for a short time once selected. I can't understand why Robin has to hang around waiting to be able to speak again when he's chatting up Marian.

It's at its worst when you get taken prisoner and find you can't escape because the fight icon can't be selected. Quite why this happens is beyond me, as it simply serves to spoil the flow of the game.

So, summing up time. Robin Hood is a novel and reasonably effective way of converting a tricky subject to computer. It's a good fun game with plenty of scope and tons of lastability, but it's slightly marred by some silly little bugs. Not quite the stuff that Gamer Golds are made of, but well worth a look all the same.

Daniel Whitehead



VISION GGG
Small and obscure sprites, but some atmospheric still screens throughout.

AUDIO GGGG
Great authentic tunes and some useful FX.

PLAYABILITY GGG
A great game is let down by some thoughtless features.

ADDICTION GGGG
If you can ignore the idiosyncrasies then it's an engrossing and timely adventure.

85%

Quality of life is one of those nebulus ideas that is very difficult to quantify, let alone try and maintain at a high level for any period of time. You try being a Prime Minister and see how you get on. Attaining a high quality of life is the main aim behind Gremlin's first foray into the world of God games.

The approach they have adopted pitches the game somewhere in the land between Populous and Sim-City, fighting an opponent while you attempt to develop a viable city with all its attendant problems of taxation, population control, crime and who cleans up when the neighbour's dog craps in your garden.

You begin your life as commander of your first planet with little but a command centre, a few solar panels, a load of cash, a group of advisers and very little else. The Quality of Life begins at a meagre 40 per cent, and it is up to you to try and develop the city to a large bustling hubbub of parties and orgies, and organise an efficient workforce in between – sounds remarkably like being the editor of Gamer.

All sorts of things affect the QOL, anything from the view from the living quarters to taxation to how much food is available. Just hints are given in the manual, so only through playing and experimentation will you find out all the answers.

The first action you will probably wish to perform is a wee bit of construction. You have a choice of 24 different buildings, too many to list individually, which fall into loose categories. Resource-generating buildings, such as mines and chemical plants, must be built near appropriate resources to be effective, although power stations and similar electrical installations can be placed anywhere you like. In any case, planning is probably wise to maximise the efficiency of distribution of electricity to other buildings.



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The next general category includes manufacturing installations. These make use of the resources to produce crucial items like tanks or food, vital to the survival of the colony and if neglected, guaranteed to send the QOL figure plummeting.

The final category includes those installations that actually improve the QOL as opposed to maintaining it. Food stores, stadiums, life-support systems, hospitals and fixed defence units like laser turrets are included here, and must be placed and used judiciously to maximise their effect.

For example a large event at the stadium will improve morale, an important factor in the QOL equation, but because everyone is off watching the games then the work rate will drop. A hospital is not essential but it will allow you to directly control the birth rate, and it will allow the population to recover more quickly from the effects of a virus, for example.

For the installations to be of any use, they must be manned by colonists up to the maximum allowed – usually around ten per installation. You are perfectly at liberty to use less than this number should you feel that maximum production is not essential at any particular time, but it is also crucial that production levels are monitored so that you can up levels at any time should they be required. Not only do the installations



The various maps allow you to examine the layout of buildings, installations and ore deposits



A breakdown of military force on the planet





Command centre and launch pad. Two crucial parts of your colony



Stock control gives you the chance to sell some of you excess production



Scaffolding shows new building being constructed

need manning, but construction will also occupy the colonists. It is entirely likely that a large number of fully–manned installations could mean that construction will not be possible, because all the available men are busy elsewhere.

Juggling manpower is one problem, but so is juggling your budget. Taxation levels must be set, but an eye must be kept on the long–term effects on the QOL – nobody likes heavy taxation, no matter what the reason.

Also, grants for civilian and military development must be closely monitored. A high grant to the military will provide fast development of new weapons, but it may not make the population too happy if they haven't yet got a sports stadium. Of course, too low a grant will mean that the military is under–developed, making the colony vulnerable to a more advanced attack.

Control of your military is just as vital a part of the game as constructing a well ordered and shiny, happy city. Organising the static defence systems, such as laser turrets and missile launchers, is only one part. The other is the construction, control and deployment of the mobile forces.

Initially, the decision will lie in how much manpower you are willing to commit to the factories producing the equipment, and which type of vehicle you want to produce – the more advanced, the longer it takes and the more resources it will use.

Once you have built up your stockpile of equipment, decisions have to be made as to where it will be placed and how it will be manouevred. At your disposal you have eight markers which can be strategically placed anywhere on the map and used to guide the tanks and aircraft around the play area, by sending one or a group to any one of the markers. They can also be guided to attack an enemy city, although the location of this will not become known to you unless you sponsor spying activity, another demand on your stretched budget.

There is no way of individually controlling the tanks or aircraft. The only control you have is of general movement patterns, as all of the attack responses are automated. Defence may seem an unnecessary burden on a budget which could be better devoted to improving the QOL, but it will never be very high if the colony is overrun by aliens.

To help you make these weighty decisions are a panel of advisers. The advisers give information about each of the different aspects of the colony – population, budget, number of manufacturing installations, morale etc – and will occasionally give recommendations. Simple things like: "We need more food ya bugga!" will not appear, but more succinct hints will be apparent.

It all sounds very complex and it is, but this is the next generation of God–games and will appeal to those who have successfully met the challenge of Sim-City and Populous and are looking for something more challenging to take them on to the next level of gameplay.

It skilfully combines both the constraints of building a city that can be happily lived in with the problems of trying to defeat a malevolent opponent, and all the time you have to try and keep every one happy by not overspending and leaving everyone to starve.

There is no fixed objective to aim for, no timespan across which your efforts are measured. The only target is a Quality of Life which reaches above and beyond 90%.

But its complexity does not make it difficult to use,.Simple point and click systems and an isometric large–scale map mean that the game's system becomes almost second nature after a period of familiarisation.

Don't make the mistake of comparing this game to Image Work's Mega Lo Mania, one of last issue's Gamer Golds – they are very different to one another. MLM is far less complex and geared to fun and humour, while providing a large amount of challenge and a fabulous game.

Utopia goes for the more involved and time–consuming approach which has no definite answers. It doesn't have that many definite questions to be honest. And it will provide hundreds of hours of brain–blowing to those willing to invest the time needed to be successful. They are both excellent games doing two different things.

The crisp and colourful graphics are easy on the eye and the sound is quite simply superb – a dramatic tune coupled with stunning effects make it worth turning the sound up. Quite simply Gremlin have produced a very slick package which takes the notion of controlling and developing a city or planet one stage further than anything before.

Be warned however – it may be easy to use, but it is anything but easy to beat. If you can't invest the time needed, think carefully before purchasing. This isn't a criticism, merely something to be aware of. But whether you have the time or not, this is a game worthy of Thomas More's legacy.

Jools

VISION – GGGG
Clear and colourful with a lot of variety.

AUDIO – GGGGG
Amazing soundtrack and glorious effects.

PLAYABILITY – GGGG
Easy to use but challenge too big for some.

ADDICTION – GGGGG
Constant battle for success that never lets go.

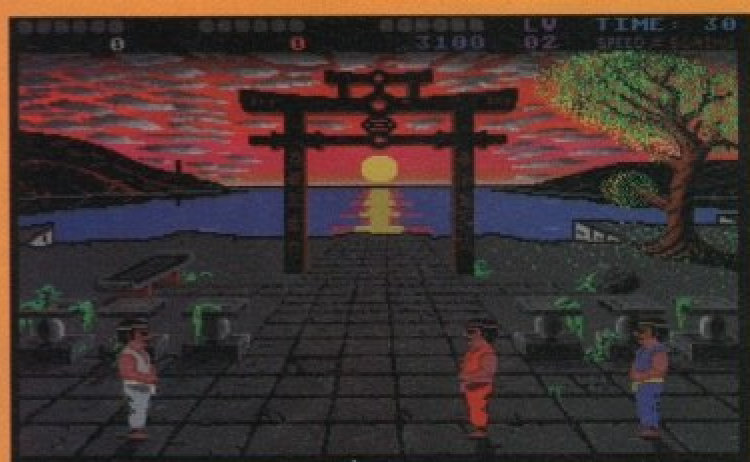
93%



cheat mode

Gamer brings you a collection of white hot hacks and cheats for your favourite Amiga games





IK+ – Hit Squad

When you have been knocked down, press the spacebar to pause and then press Fire. You will now be invincible. You will have to repeat the cheat for every successive level.



ELIMINATOR – Hewson

Once the game has loaded, press Help and enter the following passwords to hop, skip and jump to later levels.

Level 2: AMOEBA
Level 3: BLOOP
Level 4: CHEEKI
Level 5: DOINOK
Level 6: ENIGMA
Level 7: FLIPME
Level 8: GEEGEE
Level 9: HANDEL
Level 10: ICICLE
Level 11: JAMMIN
Level 12: KIKONG
Level 13: LAPDOG
Level 14: MIKADO

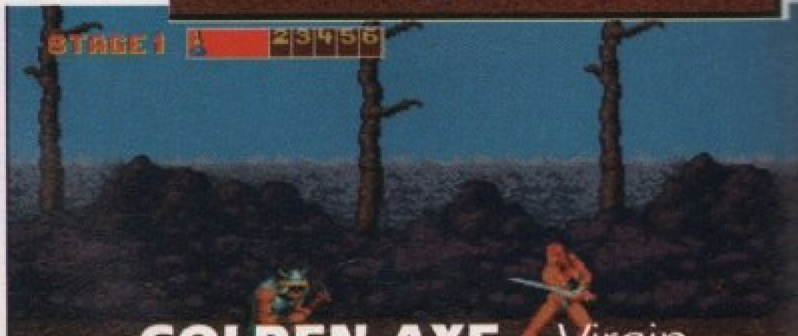
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GOLDEN AXE – Virgin

To gain three extra lives, play in One Player Mode but with two joysticks. When you lose your third life, hit Fire on the other joystick to use the second player's three lives.

AWESOME – Psygnosis

Play normally until you get to inside the ship. Move the cursor to the shield icon and then simultaneously press "+" on the numeric keypad and the Fire button. If you now press F5, the screen should flash and give you invincibility. If you press F6, you will get infinite ammo'. Also, if you press any of the keys on the top row of the keyboard except for Esc and Del, each will give you a different weapon.

ELITE – Firebird

Type SARA as your entry for copy protection, then at the second attempt enter the correct word. You will now be able to adjust the levels of weaponry and cargo by using the Plus and Minus buttons.

VOYAGER – Ocean

Get to the options screen and type WHEN THE SWEET SHOWERS OF APRIL FALL to receive infinite lives.

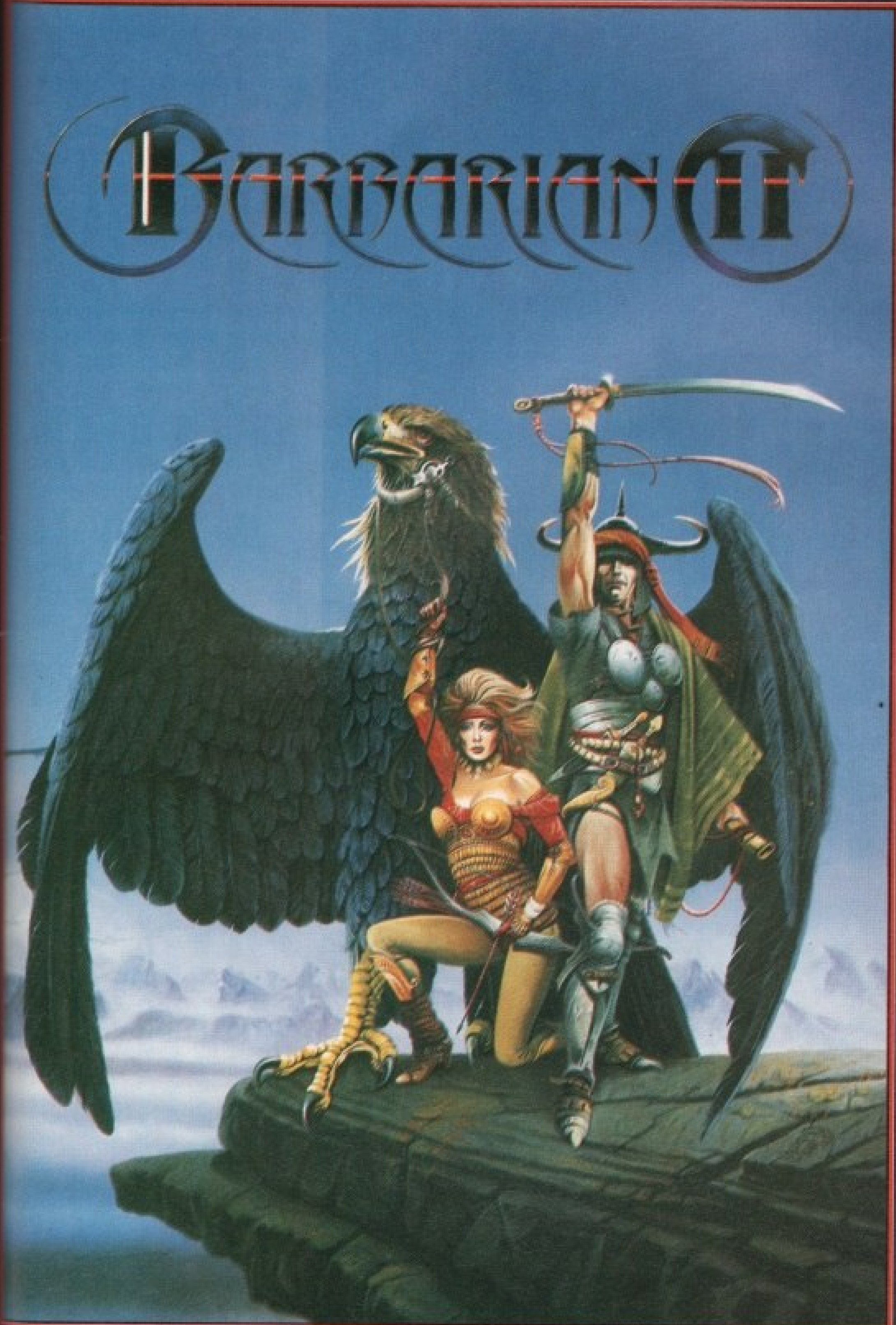
CHIPS CHALLENGE – US Gold

If you press F during the game, the screen will flip indicating that the game is ready to accept these cheats. Enter SAGITTARIANS MAKE BETTER LOVERS to receive copious supplies of keys, shields, ice boots and magnets. Enter 09/12/57 to get unlimited time. Enter I THINK THEREFORE I AM to avoid having to collect all the chips to leave the level.



BLOOD MONEY – Psygnosis

Pause the game and press Help for infinite lives.











BARBARIAN II

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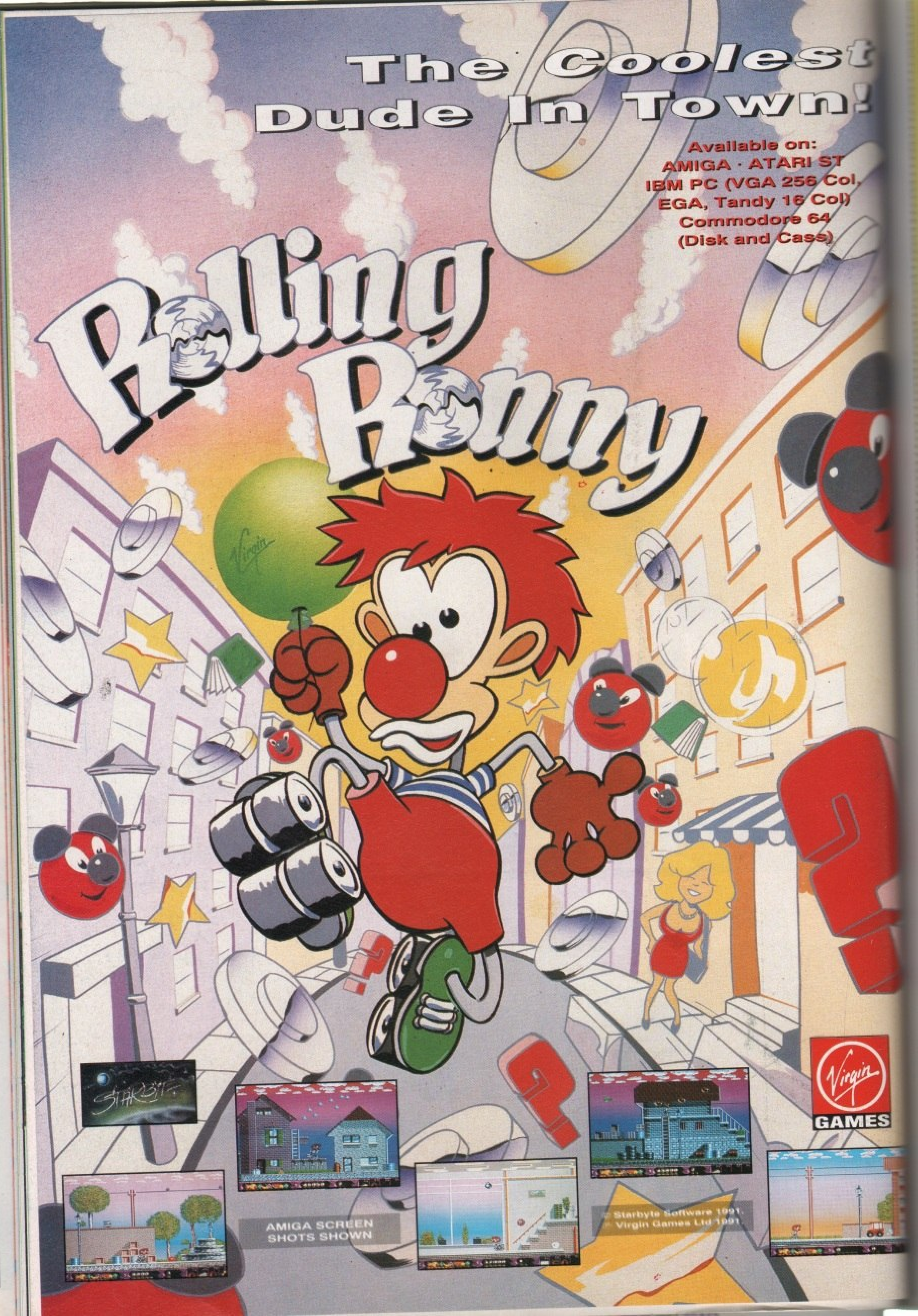
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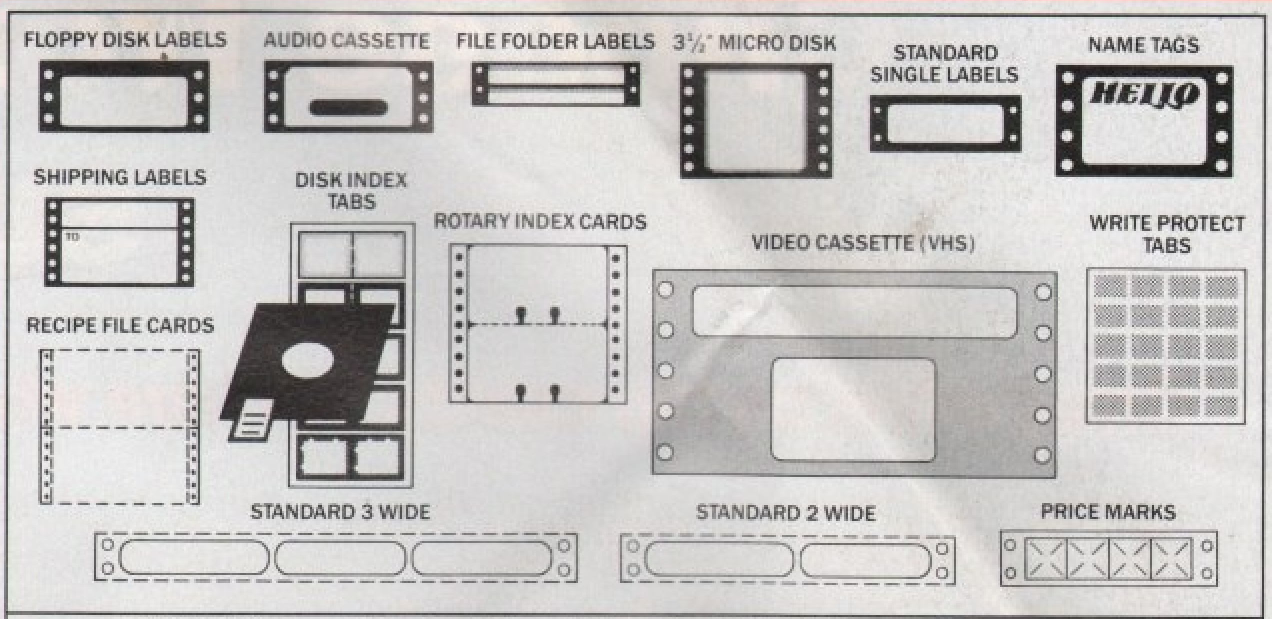
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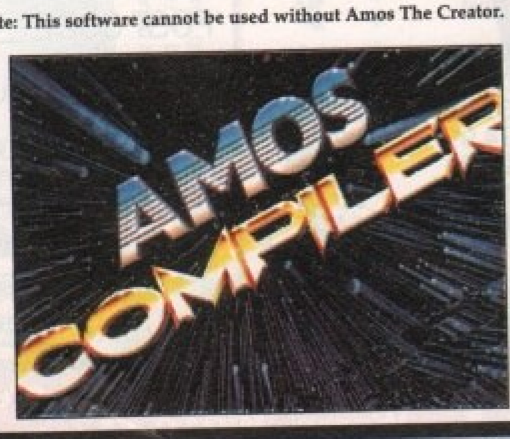


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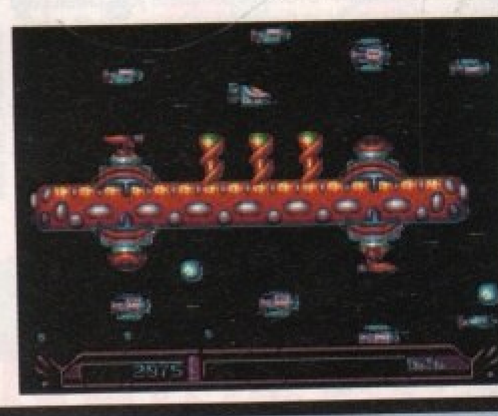
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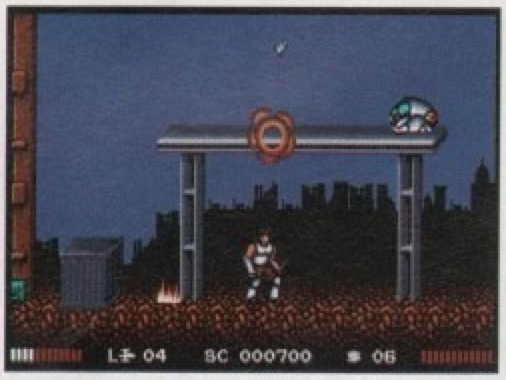
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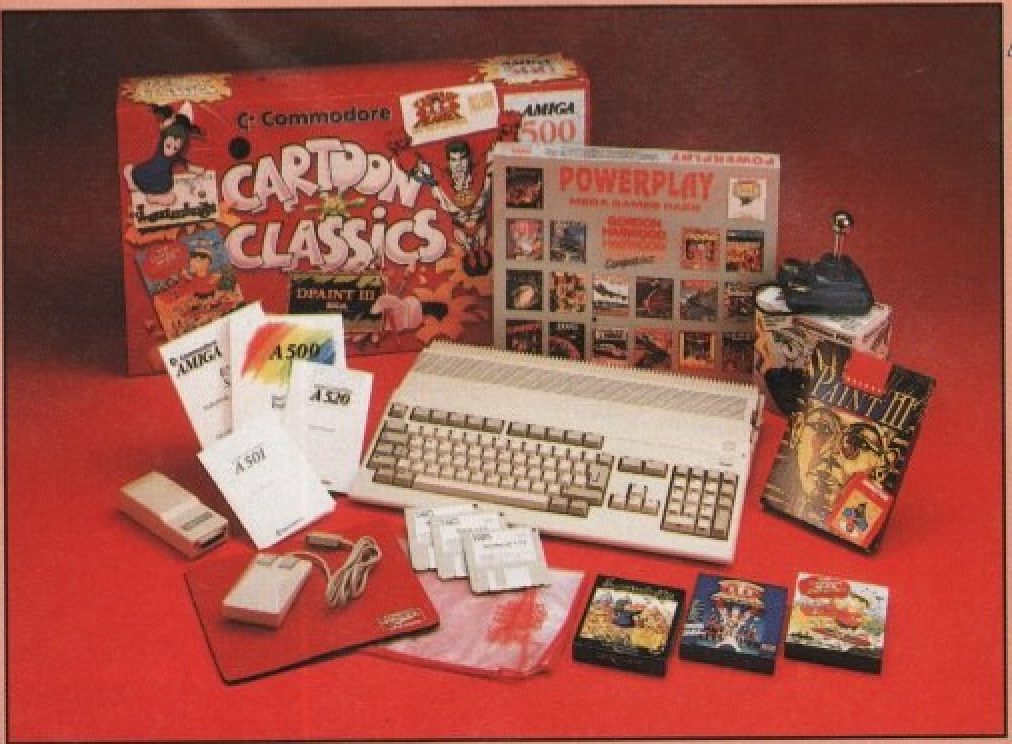
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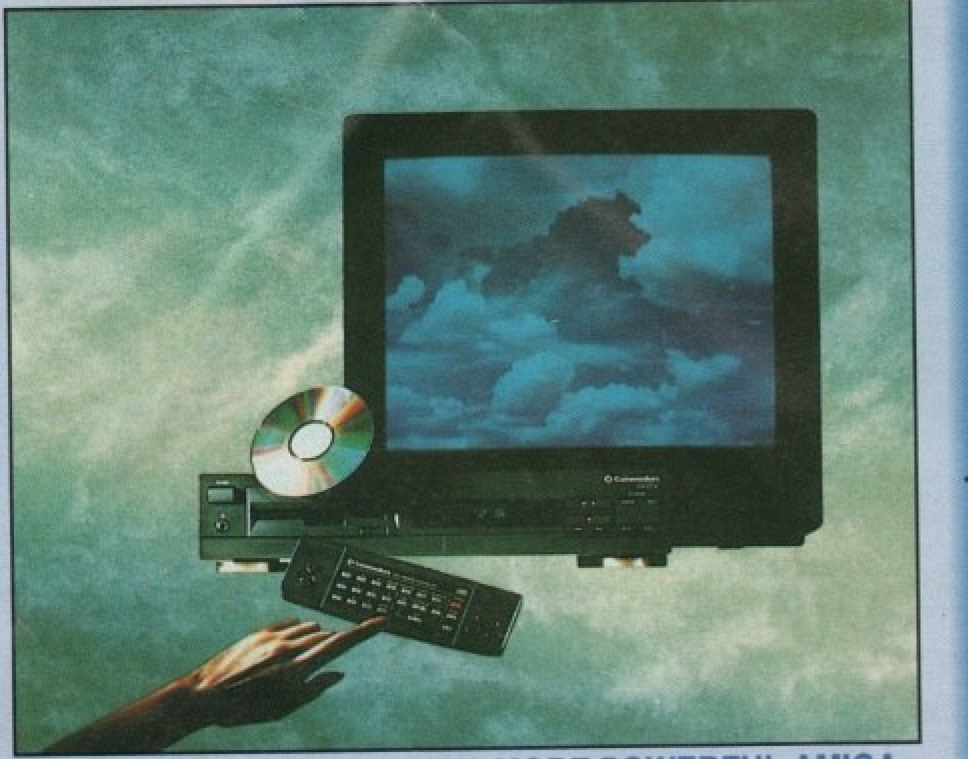
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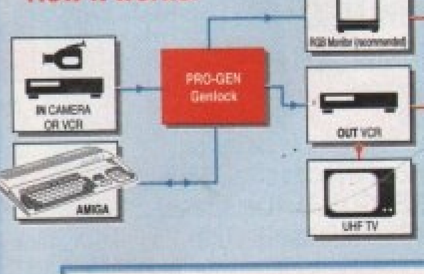
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STAR LC24-200 NEW COLOUR PRINTER - 220/55 cps — **£309.95**
Colour version of the new LC24-200 Mono
- 80 Column Dot Matrix
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- 30K Buffer expandable to 62K
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- Reverse paper feed
- 12 month warranty
- Paper park with auto single sheet loading
- Micro paper feed, Max. paper width 11.7"
- Supplied with colour & mono ribbons
- Better quality than LC200 colour
- Extra font cartridges available
- Programmable from front panel, No DIP switches

CITIZEN SWIFT 24 PIN COLOUR - Up to 160/50 cps — **£319.95**
24 Pin Colour Printer
- Push and pull tractor built-in with bottom feed for labels & multi-part stationery
- 360 x 360 dpi Colour Graphics
- 2 Year Citizen warranty

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Colour XB24-200 & XB24-250 - 275/80 cps
£399.95 24-200 Colour — Wide Carriage **£499.95** 24-250 Colour
These NEW top of the range Stars replace the XB24/10 & XB24/15, & offer the best possible quality dot matrix printing
- Exceptional print quality
- 4 x 48Pin super letter quality fonts
- 14 x 24Pin near letter quality fonts
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- 360 x 360 dpi Colour Graphics
- 12mths on-site warranty (UK Mainland)

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- A full page of colour graphics in 4 minutes (typical)
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- 12month on site warranty (UK Mainland)
- Every desktop publishers dream

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All the characters Per Second speeds quoted below are Draft/LQ at 10cpi

PRINTER ACCESSORIES

CITIZEN PRINTER ACCESSORIES:

Citizen 120D+ Sheet Feeder	£69.95
Citizen 120D+ Parallel Interface	£49.95
Citizen 120D+ CBM C64 Serial Interface	£49.95
Citizen 124D 32K Buffer	£13.95
Citizen 124D Semi-Auto SheetFeeder	£39.95
Citizen 124D Automatic Sheet Feeder	£79.95
Citizen 124D Printer Stand	£24.95
Citizen Swift 9 Semi-Auto SheetFeeder	£39.95
Citizen Swift 9 Automatic Sheet Feeder	£79.95
Citizen Swift 9 Printer Stand	£24.95
Citizen Swift 9X Printer Stand	£34.95
Citizen Swift 9X Automatic Sheet Feeder	£139.95
Citizen Swift 24 32K Printer Buffer	£13.95
Citizen Swift 24 Semi-Auto Sheet Feeder	£39.95
Citizen Swift 24 Automatic Sheet Feeder	£79.95
Citizen Swift 24 Printer Stand	£24.95
Citizen Swift 24X Auto Sheet Feeder	£139.95
Citizen Swift 24X Printer Stand	£34.95

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Z-Fold Printer Paper	£15.95
Transparency Paper - Pack of 50 Sheets	£52.95

STAR PRINTER ACCESSORIES:

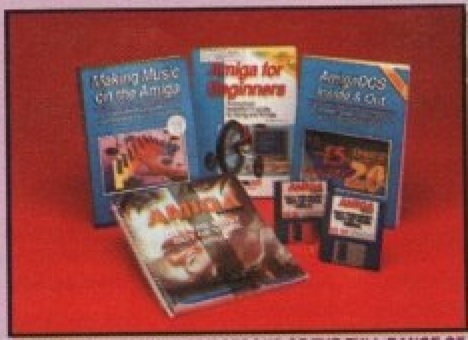
Star LC-20 Mono Printer	
Automatic SheetFeeder	£74.95
Star LC24-10 Mono Printer	
32K Buffer £67.95	£67.95
Automatic SheetFeeder	£74.95
Star LC-200 Colour Printer	
Automatic SheetFeeder	£74.95
Star LC 24-200 Mono Printer	
32K Printer Buffer	£34.95
Automatic SheetFeeder	£74.95
Star LC 24-200 Colour Printer	
32K Printer Buffer	£34.95
Automatic SheetFeeder	£34.95
Star XB 24-200 Colour Printer	
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Font Cartridges -	
Styles To Be Announced	£29.95
128K Centronics Printer Buffer	£89.95
Automatic SheetFeeder	£114.95
Dual Bin SheetFeeder	£429.95
Star XB 24-250 Colour Printer	
Pull Tractor	£34.95
Font Cartridges -	
Styles To Be Announced	£29.95
128K Centronics Printer Buffer	£89.95
Automatic SheetFeeder	£174.95
Dual Bin SheetFeeder	£469.95



GENUINE CITIZEN & STAR REPLACEMENT PRINTER RIBBONS

PRINTER	PRINTER TYPE	BLACK RIBBON	BLACK RIBBON X6	COLOUR RIBBON	BLACK RIBBON X6
CITIZEN 120D+	BLACK ONLY	£4.95	£24.95	N/A	N/A
CITIZEN 124	BLACK ONLY	£4.95	£24.95	N/A	N/A
CITIZEN SWIFT 9	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
CITIZEN SWIFT 24	BLACK/COLOUR	£4.95	£24.95	£16.95	£99.95
STAR LC10/20	BLACK ONLY	£4.95	£24.95	N/A	N/A
STAR LC200 C	BLACK/COLOUR	£6.95 ZX9	£36.95 ZX9	£12.95 ZX9CL	£69.95 ZX9CL
STAR LC24/200 M	BLACK ONLY	£8.95 Z24	£49.95 Z24	N/A	N/A
STAR LC24/200 C	BLACK/COLOUR	£8.95 Z24	£49.95 Z24	£14.95 X24CL	£74.95 X24CL
STAR XB RANGE	BLACK/COLOUR	£8.95 Z24	£49.95 Z24	£14.95 X24CL	£74.95 X24CL

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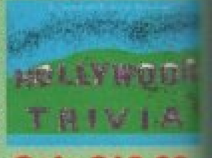
More brilliant arcade attacks with Tetris, Pipe Line, Air Ace 2, Organic Horror, Gore Blasters and Escape From Jovi excellent! Order Code GPA3.



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TRIVIA PACK

A mega compilation of trivia quizzes that will keep you occupied for hours! Includes thousands of questions on a variety of subjects. Includes Quiz, Hollywood Trivia, Trek Trivia, Star Trek Next Generation Trivia. Order Code GP6A.



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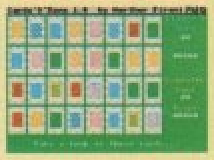
A mega compilation of of classic board games includes Back Gammon, Five In A Line, Chess, Tiles, Flipper, Amigo, China Challenge, Master Mind, AmigaTration, Up and Down, Triangle and Triple Yacht Z. Order Code GPA4.



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CARD GAMES

If you like playing card games then this is the pack for you! Includes Card o Rama, Spades, Black Jack, Solitaire X, Klondike Solitaire, Canfield Solitaire and Cribbage. Order Code GPA5.



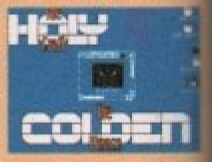
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MEGA GAMES & PRICES!

PSL1	Space Blob is a brilliant platform cavern game. £3.00.
PSL2	Mr Dig, help Mr Dig collect the apples and kill the monsters. Requires 1MB RAM. £3.00.
PSL3	Q-Bold shoot blocks at the various random shapes decending on you. A Tetris variant. £3.00.
PSL4	Computer Conflict excellent speech and graphics in this all action arcade game. Requires 1MB RAM. £3.00.
PSL5	Subculture by Kevin Kendall a mega shoot 'em up. £3.00.
PSL7	Dizzy Lizzy an excellent game across between Pacman and Boulderdash. £3.00.
ALP5	Jungle Bungle adventure in the jungle mainly for children with excellent graphics, speech and animation. Requires 1MB RAM. £3.50.
ALP6	Pukado avoid the baddies and skull as you try to empty the screen of tiles. £3.50.
ALP7	4 Way Lynx a 22 level puzzle game where the object is to connect a specified number of tiles to the main centre tile. Requires 1MB RAM. £3.50.
ALP11	Go Getter an excellent board game that will keep you occupied for hours! Guess whether your on your path the number on the next step is higher or lower than the one you are on, watch out for teleports and and bonus points. Requires 1MB RAM. £3.50.
ALP16	Reversi II based on the board game Othello. Requires 1MB RAM. £3.50.
ALP17	Dog Fight!! upto 8 players can play this brilliant aerial shot 'em up. Requires 1MB RAM. £3.50.
ALP19	X IT 50. A split screen shoot 'em up. £3.50.
ALP21	Quingo an excellent quiz game where you answer questions and play bingo. Requires 1MB RAM. £3.50.
AMU13	Bull Run an American civil war simulator.
AMU14	Battle Mech a strategy war game between robots.
FAUG52	PacMan 87.
FF194	Moria the single player dungeon adventure game. Requires 1MB RAM.
FF336	Car a brilliant racing game.
PD90	Tennis! and excellent implementation of the sport. Requires 1MB RAM.
PD79/80/81	Star Trek by Twisted Images. Full graphics and sounds from the original Star Trek. Requires 1MB RAM and External disk drive. £9.00.
PD215/216	Star Trek by Agatron. Full graphics and sounds and animation from the new generation Star Trek. £6.00.
PD233	Holy Grail adventure that requires 1MB RAM.
PD234	The Golden Fleece adventure.
DV27	Flower Powerscan you grow plants for the flower show? £3.50. 1 Mb.
PV3	Galleons ship to ship combat a sequel to Dogfight II on DV17. £3.50. 1Mb

ADVENTURE GAMES

Four excellent new adventures to take you into different worlds. Includes The Holy Grail, Golden Fleece, Midnight Thief and Dragon Cave with its 3D graphic display. Order Code GPA7.



Only £10.00.

SPORTS PACK

This pack should keep you fit! Includes Tennis (1mb RAM), Down Hill Skiing and Car racing. Order Code GPA8.



Only £8.50.

CLIP ART

The following 7 ClipIt! packs are all Black and White clip art spot illustrations suitable for any program with graphic capabilities. Each pack contains 5 disks except pack 7 which contains 3 disks.

CIA1 - Subjects covered: sports, flags, animals, cartoons, humorous, Xmas, Jewish, Borders, Halloween, Valentines, horses, eyes, alphabets, hands, 1930's trademarks, zodiac, cars etc. plus lots more. £12.50.

CIA2 - Subjects covered: men, women, illuminated A to Z, arrows, stars, explosions, humorous, cartoons, pointing hands, food and more. £12.50.

CIA3 - Subjects covered: Fruit, herbs, meat, arrows, special occassions, vegetables, kitchen utensils, cups and glasses, art deco and breakfasts. £12.50.

CIA4 - Subjects covered: More Art Deco, Babies, Boys and Girls, lots of humorous, illuminated A to Z, scrolls, more special occassions and calligraphic ornaments. £12.50.

CIA5 - Christmas Clip Art Pack: over one hundred images of christmas from both the 19th and 20th century from father christmas to borbals, to christmas trees and borders. Perfect for creating posters, cards and invites etc for any christmas ocassion. £12.50.

CIA6 - Fantastic and Mythological Creatures and Monsters: an excellent pack of creatures from all over the world: Japan, Europe, China, India, North America, South America etc. some dating back 400 years! All sorts of weird and wonderful creatures including death masks, dragons, gargoyles and lots more! £12.50

CIA7 - Flower Power Clip Art Pack: pictures of the most popular flowers, plus arrangements, silohuettes, flowers in vases and typesetting borders. A 3 disk pack for £8.50.

PROGRAMS

PD499 - AmiBase V3.76 the excellent database.

FF365 - Badger a reminder program that displays any important events that are 'due', but not bother you if there is nothing to report.

FF372 - Magnetic Pages V1.0 allows you to create a disk-based magazine. You can combine text and graphics on a single page, branch to different sections by clicking on icons and play music.

FF385 - MortCalc V2.5 an accurate loan calculator.

FF387 - NTSC-PAL for owners of Amigas with the new ECS 1Mb Agnus installed the ability to boot into either a NTSC or PAL environment.

FF452 - Budget V1.302 a program to help with managing personal finances.

FF425 - A-Gene V3.1 an excellent genealogy database program. Limited to 600 persons/300 marriages. requires 1MB RAM

FF427 - Chemesthetics V2.0 draws molecules using the calotte model. Very comprehensive it includes a picture save option.

FF429 - Scrub will detect if a drive has a disk cleaner in it then spin for 30 seconds while moving the heads around.

FF432 - Reader V1.0 will scan the supplied 24,000 updatable word list to locate which words can be made from the letters given, ie. m.t.h for the word MATCH. Very comprehensive.

FF434 - Typing Tutor a simple typing tutor program which measures your typing speed and adjusts the level of difficulty accordingly.

AMP1 - Home Business Pack : UEdit the excellent wordprocessor and spell checker, Visicalc the spreadsheet, RIM and JBase two brilliant databases only £8.50!

PD416 - NComm V1.9. ALL you need for communicating via the phone line.

PD59 - Ameteur Radio Disk: StarTerm V3.0, Packet Terminal programs, a HAM Database for the Amiga Amateur Radio Group, Morse Code, Satellite Tracking and loads of HAM utilities.

AMP4 - Starter Utility Pack: This pack was compiled with the new Amiga user in minD. The pack includes: File compressors used on the Amiga - ARC, LHARC, Zoo and Power Packer. DirWork the friendly enviroment that allows many of the CLI commands to be executed at the click of your mouse. Also a virus checker and destroyer, an icon editor, a sector editor, a communications program for modem users and lots more, PLUS the word processor UEdit and the Database JBase! Only £8.50!

FF366 - PrintStudio V1.2 this program allows you to print any text file in many styles, print any part of or a whole picture, screen or window, also control your printer and much more.

TB6 - BioRhythms the life cycles program.

TB9 - FastMem allows you to toggle ON/OFF your expansion RAM. Also FuncLey allows you to assign text or commands to F1 to F10.

TB16 - CLI Wizard V1.2 is the excellent mouse operated CLI replacement makes using the CLI a doddle!

TB17 - Database Wizard V1.1 allows you to store upto 400 names and addresses.

TB30 - MyMenu create you own menu on Work Bench allows you to have all your favorite programs at the click of your mouse. Also Icon Meister the excellent icon editor.

FF342 - IE the icon editor that allows you to create icons upto 640 x 200 pixels!

PD279 - ESA Utility Disk 1. This disk contains 3 dozen excellent utilities! All menu driven it includes: Amiga Tool, BootGenerator, Coder Board, DCopyII, Font Ripper, Menu Maker, Power Utility, Power Packer, PPMore V1.2, Save IFF, Scanner V2.0, Scroll Maker 2, plus virus checkers and destroyers and loads more!

PD280 - The Champions Total Utils 1: This compilation contains Boot Generator, Boot Girl, BootMaker, BootWriter, Character Editor, Demo Maker, DiskX, Flash Ripper, Font Ripper, Guru Maker, Guru Master, Icon Master, Make A Menu, NoiseTracker, Graphics Searcher, SetKey, SlideSHow Maker, Time Set, Tristar Virus KillerTxED.

FF378 - MACH II V3.0 this brilliant 'all in one' utility features your help screen, mouse accelerator, PopCLI, Screen Blanker, Mouse OFF, Sun Mouse (activates a window by placing mouse it), Click To Front (bring window to front by clicking on it), Cycle (move a window or screen to back with left then right mouse button click, Window and Screen Shuffler, CLock, Alarm, Beeper and loads more. Exellent!

PD300 - The Master Virus Killer the latest version is always in stock this utility recognises 124 viri! A full list is available, excellent and very easy to use and very comprehensive.

PD62 - The Public Dominator Anti Virus disk contains Virus X V4.01, VCheck V1.2 (for memory), VCheck V1.9 (for disk drives), Zero Virus V1.3 the fully integrated virus detector and killer. Also Boot Block Champion the utility and information on boot blocks.

TB31 - ShoWiz show any picture with or with out your own controlling script, show 1 picture, or even 1 or more disk fulls, also play a music file and show in text in any colour! Perfect for presentations.

PD93 - ARP V1.3 the Amiga DOS Replacement Project.

FF228 - JazzBench v0.8 is a multitasking WorkBench replacement.

FF246 - NoClick V3.6 this program stops your disk drives clicking when there is no disk in the drive.

FF251 - DiskSalv V1.42 more powerful than Disk Doctor this utility will attempt to salvage data from bad disks.

PD304 - MessyDOS handles MSDOS formatted disks (this includes Atari ST) exactly the same way that native Amiga disks are used.

FF243 - PassWord V1.21 you specify the password for your system security. Also Pcopy V2.0 the excellent disk copier.

FF279 - MRBackup V3.3 the hard disk backup utility.

FF300 - TitleGen V1.6 excellent 'script language' that creates scrolling text in any font and colour upto 500 lines long! Perfect for video titles.

FF213 - ICONS! This disk contains 300 8 colour icons!

AMI22 - Printer Driver Generator this program will create a driver for your printer.

APDC18 - Floppy Disk Utilities: QuickCopy, Disk Mapper, Disk Salvage, Viurus Check, Directory Master, Amiga Monitor, Calculator and more.

MUSIC

PD281/282 - Oktalyser V1.1 the music composer £6.00

PD285 - Games Music Creator creat music for games and demos etc.

PD299 - MED V3.00 the music editor with MIDI support.

PD553 - Sound Tracker V4.0

FINANCE

AMP7 - Personal Finance Pack: This pack contains 11 programs that will handle just about every aspect of your personal finances: Bank & BS accounts, Loans & Mortgages. This special money saving pack is only £8.50!

LANGUAGES

PD211 - North C V1.3 C compiler that features compiler, liner, assember, examples and tools.

FF456/457 - C Manual V2.0 is a complete C book for programming the Amiga includes 100 examples with source code £6.00

FF339 - PCQ the Pascal compiler.

FF347 - Cursor the Amiga Basic compiler.

FD60 - Modula II compiler

FF314 - A68k V2.61 68000 assembler.

EDUCATION

DV37 - Rocket Maths 4 Part Maths Game: Takeoff, Star Map, Rock Storm and Landing. Choose Easy, Medium and Hard with Times Table, Take Away, Add Up and Divide. By author of DV10. £3.50. 1Mb.

DV1 - Colouring Book a good colouring book for young children. £3.50.

DV2 - Arc Angel Maths a good math program that includes graphics to aid learning. £3.50.

DV4 - Thinga Majig is a puzzle program with 24 built in puzzles to choose from. £3.50.

DV8 - Work and Play (requires 1MB RAM) 3 excellent programs Funtimes Table, Let's Go Shopping for maths and Click Clock teaches a child to tell the time. £3.50.

DV10 - Word Factory which is a games type enviroment that teaches spelling. £3.50.

AMP6 - Over 8's pack: 2 excellent map drawing programs of any location on earth, Evo follows the evolution of life, Chemistry Element Periodic Table includes with details and graphics of all elements, Unit Conversion is a program that allows you to choose all types of unit i.e length, time, weight, speed etc and then do conversions and comparisons between them, plus more! German Language Tutor, Speak and spell tutor, Study Aid Cards, Hermes Formula, Cloud, the weather, GEO Time, Gravity Simulator, FUNC2D, Gravity Well, Air Foil, Wave Maker and others. An excellent pack for only £12.50!

PSL8 - FUN TIME 1 a great educational offering aimed at children age 3 to 6. This disk is crammed with delightful tuition on many subjects: shapes, keyboard, clock and picture.

PSL9 - FUN TIME 2 a great educational offering aimed at children age 3 to 6. This disk is crammed with delightful tuition on many subjects: money, seasons and mouse.

FONTS

None of the following font disks repeat any fonts.

The following 4 font packs each contain 6 disks with over 60 multi coloured fonts in each pack. Each pack is £15.00 and is fully comaprible with all Amiga IFF font programs. A full listing of each pack is available on our disk based catalogue.

PSFF1 - Fletcher Font Pack 1.
PSFF2 - Fletcher Font Pack 2.
PSFF3 - Fletcher Font Pack 3.
PSFF4 - Fletcher Font Pack 4.

The following 2 font packs each contain 6 disks with over 120 single coloured fonts in each pack. Each pack is £15.00 and is fully comaptible with all Amiga IFF font programs. A full listing of each pack is available on our disk based catalogue.

PSFFA - Fletcher Font Pack A.
PSFFB - Fletcher Font Pack B.

PD53-56 - Public Dominator font pack contains 50 single coloured fonts on 4 disks for £10.00 compatible with all IFF font using programs.
Also available as individual disks for £3.00 each.

GRAPHICS

DV35 – T-Tec Draw allows you to produce high quality technical drawings with printer option. 1Mb. £3.50.

DV36 – FracGen II a brilliant fractal generator. £3.50.

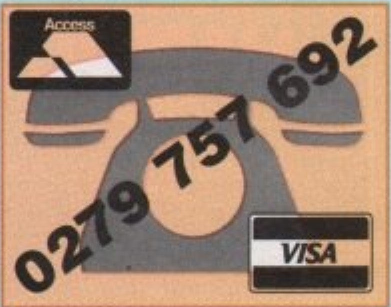
DV40 – Sprite bank Ed. For use with AMOS allows manipulation of sprite banks. £3.50.

DV42 – X-STitch will print IFF pictures in a cross stitch pattern for embroidery. £3.50

PD502 – C-Light ray tracing.

AMP3 – Graphic Pack 1: Mcad, ROT 3D, VDraw, Raytracer, Clipit1, FilterPix, Screen and window to disk savers, icon editors and more £8.50.

AMP21 – Graphics Pack 2: MSE mandlebrot explorer, Atari ST and Apple Mac picture viewer converter, Popcolours, Picture viewers, PolyGen, VIZ and KAL allow you to create weird screens and DBW render the raytracing package. £8.50.



Disk prices are fully inclusive and PER disk:
6 to 10 £2.75 each; 11 to 50 £2.00 each; 51 to 100 £1.50 each; 101 to 250 £1.25 each; 251 to 400 £1.00 each 401 to 500 £0.90 each; 501 or more £0.70 each.
Note: Licenseware products codes DV, PSL, PSFF, and AMP6 can only be purchased at full price indicated. £3.00 or £3.50.

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10	£7.00
50	£33.00
100	£40.00
200	£65.00
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10 capacity	£1.00
40 capacity	£6.50
80 capacity	£9.00
Disks and box:	
10	£7.75
50	£33.00
100	£45.00
Blank disk labels:	
100	£5.00
500	£12.50
1000	£20.00
Disk cleaning kits	£3.00
Mouse mats	£4.00

FRED FISH Special Offer!

The entire Fred Fish collection disks 1 to 520 for only £340.00! This price is fully inclusive – the floppy disks, labels, VAT, packing & delivery! (Overseas orders must add £75.00 for extra shipping)

Where can you grapple with Italians, predict your future and bazooka your mates? Look no further than the...



Colour It

Disk 1226 – 17 Bit Software

A few of these Amos colouring programs have already been released into the public domain, so to be honest I can't see any features in this one that warrant actually coughing up the readies.

There are five DPaint outlined pictures supplied on the disk, which are of good quality. Simply use the right mouse button to select the palette – which cannot be changed – and use the left button to initiate a flood fill.

You can draw your own low-res DPaint pics and colour them in, but to be honest, Colour It is so simple it offers nothing for anyone over the age of 10, and for those under there are alternative colouring programs on the market that are far more worthy.

PUBLIC SECTOR

Duncan Evans sorts out the best from the rest

Filled Vector Designer

Disk 1197 – 17-Bit Software

If you want a really meaty PD utility, you'll go a long way before you come across anything as powerful in performance, and yet as hopelessly unfriendly, as The Special Brothers designer prog.

You want ordinary vectors, filled vectors, bobs? You've come to the right place. Readable instructions, a clear info panel, sensible operation and user friendly interface? Forget it.

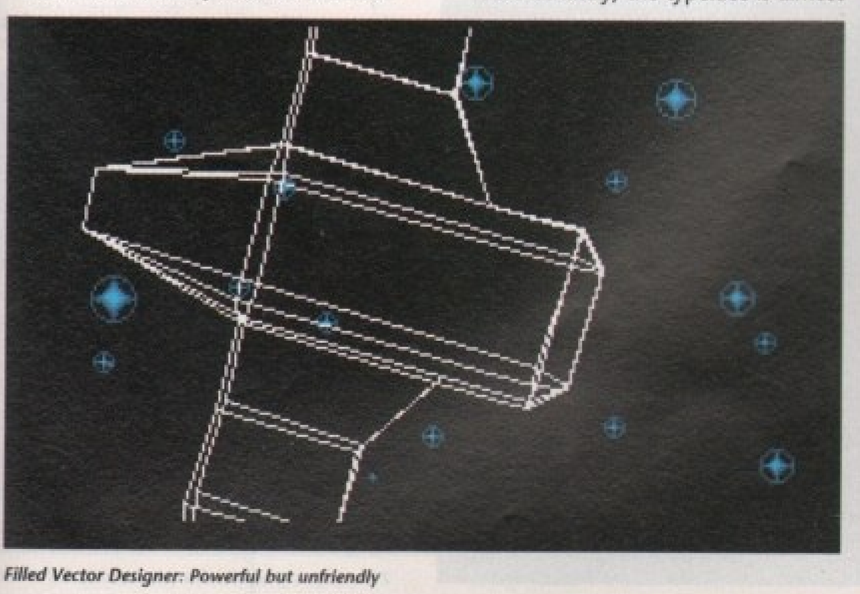
There's a nice demo showing what the designer can do, and there are copious instructions detailing how to design the aforementioned objects and incorporate them into the Red Sector Demo Maker and your own programs.

Unfortunately, the typeface is almost unreadable, with several anonymous characters, and it is rather crude in operation.

Basically the program lets you arrange and manipulate points in all three dimensions. The points are connected, then the side or face is filled. Various tricky manipulations can be performed on your object until at last you have a finished product that can be saved in a variety of different ways.

The programmers themselves admit that it is an unfriendly program but is quite powerful – they claim design of the Maximum Overdrive demo was achieved with this very utility.

Still, if you are willing to get to grips with it, it's worth a try, especially if you already have the Red Sector demo maker.



Filled Vector Designer: Powerful but unfriendly

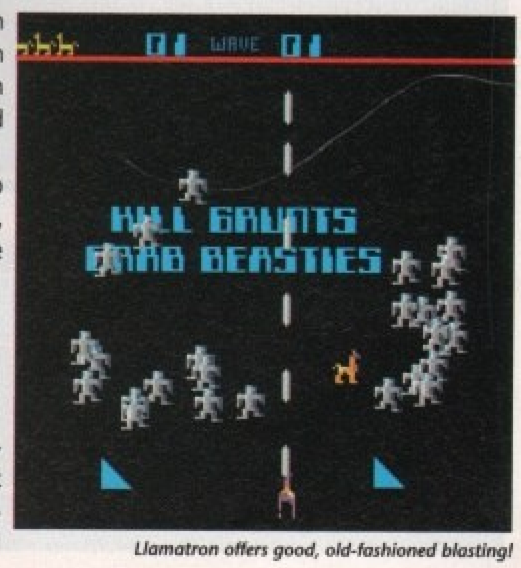
Llamatron

Disk 1249 – 17-Bit Software

Minter goes shareware! Yup, ageing hippy Jeff Minter has put out his latest pixeloid opus on shareware. In this latest offering you'll see an idealised view of the industry that guarantees that Jeff won't be working for any major software houses, and then you're into the game itself. If you like it, it's five quid to Llamasoft; if you don't, then it's no loss.

Llamatron is, of course, a reworking of Williams Robotron. Control your llama, rescue the other llamas onscreen, and blast all the creatures heading your way.

Simple stuff, jazzed up with power-ups, some pretty damn good sound effects and tough action gameplay.



Llamatron offers good, old-fashioned blasting!

Bootblock Utilities

Disk 1211 – 17-Bit Software

A handsome collection of utilities to install on to your Workbench disk or with any auto-booting disk you might want to produce. There are four cate-



gories, each nicely explained and clearly set out. There's stuff for the C directory to include in your startup sequence, for the bootblock on disks and for your Workbench.

In the standard C directory are standard commands such as Change Directory, Copy, Delete, Echo (print to screen), Text File Editor, Execute, Make Directory, Set Map (keymaps), Set Key (your own map), Type and Type To List text files to the screen, and Window Size.

Pretty routine. The more interesting utilities are in the next folder. Here you can add borders, clear the screen, check for a virus, use a simple demo creator allied with a sound file noise-player, show any .IFF picture on boot up, clear that pic from the screen, add a 3D starfield, plus stripes. There's also a couple of text message creators in Superwriter and Rainbow Writer.

Superwriter is fairly useless since you have the multi-coloured sequel, Rainbow Writer, also included. The latter is also easier to use and more user friendly. On this your message is displayed in one of a number of typefaces, on top of a 3D scrolling starfield.

A nice touch is that you can change all the colours around, and alter the speed of the starfield between very fast and a dead stop. There's also scrolling messages at the bottom of the screen which can be redefined for your own use. While this isn't a particularly powerful utility on its own, it is nice and simple and can be added to any demo disk with very little effort.

In the bootblock folder are initial utilities to use. There's a crude coloured screen scroller with a semi-legible message racing across it, a menu of options, and something called the utility boot installer.

This turns memory and disk drives on or off, forces a hard reset and installs itself on to standard bootblocks without creating any damage.

This folder is really only of marginal use since the stuff in the other folder largely overlaps anyway. Finally there are the goodies to add to Workbench. A particularly amusing one to install on a friend's disk – without telling them, of course – is the Nightmare utility.

> *Every so often the screen suddenly flashes a skull at the user while issuing a pretty horrifying scream*

Every so often the screen suddenly flashes a skull at the user while issuing a pretty horrifying scream. Make sure you turn the volume up on their Amiga, then give them a disk with this installed.

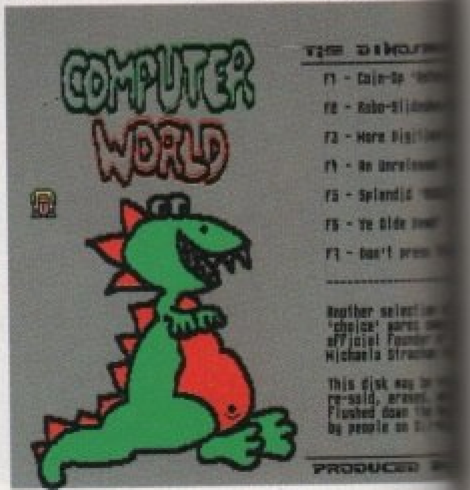
The other features are less practical joke-minded: you can load a Workbench from the CLI, change the colour of the bar at the top of a window, make the windows zoom when being closed, and change the look of the forwards and backwards gadgets.

It's an interesting collection of easy to use utilities, with some more useful than others, but it's worth getting just to scare the life out of an unsuspecting friend. If you make your own demo disks or just want to improve the front end, the other utilities will certainly give you your money's worth.

Computer World Dinosaur Collection

Disk 1240 – 17-Bit Software

A collection of infantile humour, an old demo with five tunes ripped from a commercial game, a reasonable Rebels demo with some nice music and a



The Amiga's graphics demonstrated to full effect...

Picture Help

Disk 1255 – 17-Bit Software

Convert a picture of one resolution to another resolution. The function of this program is simple enough, in that for whatever reason, you can load a piccy in one res and save it another. You can also magnify areas of the picture first, though why bother when there's nothing you can actually do with it?

This is a shareware product from an Italian with only a vague grasp of the English language and who requires you to send him, wait for it, £10 if you use the program. Or you can send him £20 to receive version 2 which will include simple art package commands. When he's written it.

The commands, such as they are, are accessed by drop-down menus. Sometimes. For some reason the program has a very hard time reading the mouse and either doesn't produce the menu, or drops it prematurely.

The ability to change the res of pictures is a marginally useful function that is certainly not worth £10 – and it's this kind of grasping that will kill shareware – especially when you cannot save the altered picture with a new filename.

This is a bug admitted to by the author – a fix is promised for version 2 – but unfortunately the program didn't work properly anyway. The file selector closed without letting you select anything. It may just be a dodgy copy, but why take the chance when there are alternative programs available?



A case of help when it's not needed?

Tarot II

Disk 1238 – 17-Bit Software

Hmm, not a utility, not a game – more like userware. That's how I would describe a program offering words of wisdom on the signs of the zodiac.

Either that or suckerware. Let's face it, you either dress in bed sheets and do unpleasant things to chickens every full moon, or you think it's all a load of twaddle for impressionable idiots.

However, in the interests of the *Amiga Computing* PD column, I asked the program for the low-down on my own sign, Cancer the crab.

Well, a nice intro followed by a muddled title page, but then straight down to business. A Cancerian's phrase is "I care" apparently. Fah, ask anyone who knows me and they'll tell you it's usually, "I couldn't give a damn" or even, "Mine's a pint".



The program eventells you your 'phrase'!

However, my colour is supposed to be silver. Well, I would have said black, but then I'm a Raiders fan, and their colours are... silver and black!

Golly, apparently Cancerians are also warm and emotional, imaginative and inspirational!

Hey, maybe there is something in this after all. Does anyone have a spare chicken?

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decent black and white version of Asteroids.

That's all you can really say about this lot, except that a couple of the selections take you back to the main menu, but won't let you select anything. There's a Robocop slideshow consisting of one picture – albeit a good one – and only the Asteroids game is worth having at all. It boasts smooth line animation and traditional gameplay.

Mech Fight

Disk 1259 – 17-Bit Software

Obviously inspired by Mech Warrior, Mech Fight is, in fact, nothing like that game of armoured mayhem. It's more a sci-fi version of the Ultima games.

You get a top-down view with small graphics wandering around stylised buildings in search of weapons, goodies and a plot.

Yes, somewhat distressingly, the plot and the *raison d'etre* of the game are left for you to discover. A good prod of the keyboard reveals unexpected commands, the most useful of which is pick up.

The space station – I presume this is what it is – is quite large and is populated by numerous facilities. There's even a swimming pool!

The most useful place to visit is a bookshop which contains info concerning a mad computer and a bounty placed on it. Aha, an objective!



Initial confusion hides an intriguing game

If you like Ultima-style games, this could be a very pleasant surprise. Initially it's all confusion, but as you start to get into the game, more and more is revealed. Well worth investigating.

Text Editor

Disk U616 – NBS

This is a text and graphics editor with the ability to import different character sets. Written by a German there are various language versions of the program on the disk, including slightly dodgy English.

The text functions of the package are rather simple, merely incorporating disk filing and search and replace functions, plus importing character sets.

The printer prefs set up is poorly presented, in broken English, so making it work with your machine is probably hit and miss. Speed-wise, the text editor is merely average, and disappointingly you can't even load the instructions file into the program.

The graphics editor allows you to mess around with .IFF piccies, and adds basic drawing and filling routines, but a challenge to an art package it is not. If you want to make alterations to pics, why use a very underpowered system and spend all night trying to get it right?

I'm afraid that this program, while offering both text and graphics functions, offers far too little in either category to give it precedence over any professional package, even at a PD price.

Raid

Disk 1722 – Virus Free PD



A vertical scroller with a difference

A couple of the games in this month's roundup are from Palace Software's Shoot-'Em-Up Construction Kit, which was released in 1989. Hopefully by now people should know how to get the best from it. Or so I hoped.

One of the better SEUCK releases is the simply titled Raid, a story of a helicopter on a vertically scrolling screen of destruction. Or a home programmer's homage to SWIV.

Yes, once past level one it does look very much like parts of SWIV. Unfortunately, this homage is merely visual; the action is more thick and stodgy than fast and exciting.

If you play the game like it was SWIV or any vertical scroller you can think of, disaster is only seconds away. The first level is quite cunning. Your ship moves too slowly and has far too little firepower to blow your way through the ranks massed against you. Picking out the route and carefully navigating by blasting specific targets is the way to progress. Then it gets harder.

The trains are nicely done, but you can come a cropper with some of the scenery. Some of it is higher than the rest – the trouble is, you can't always tell.

Not a great PD game, but a reasonable attempt, with some nice sampled sounds, and certainly tricky enough to maintain interest.

Messy Dos

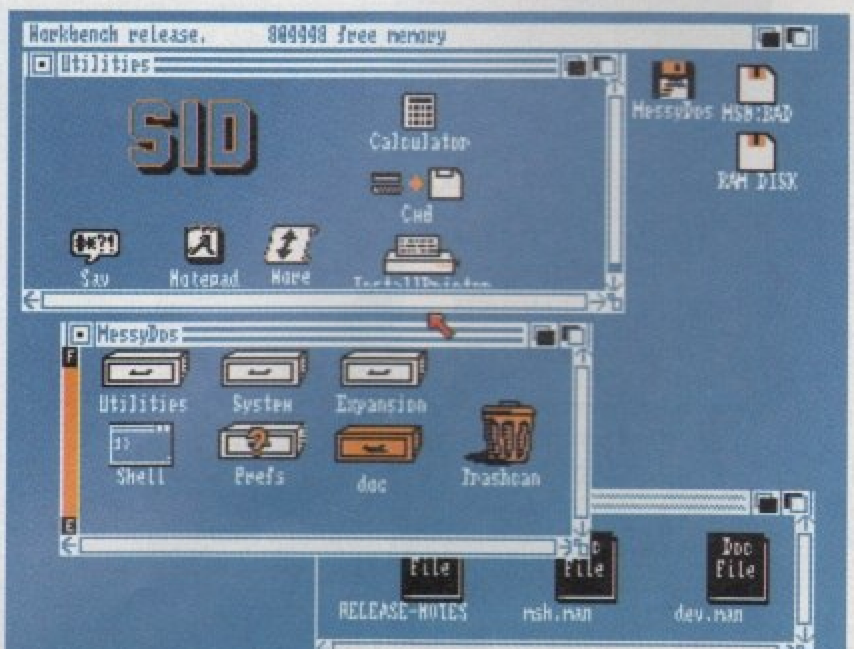
Disk U619 – NBS

If you work with the PC at all then utilities such as Dos-2-Dos probably get an airing quite often. The trouble with utilities like Dos-2-Dos is that they only enable you to copy files to and from an MSdos disk.

Messy Dos goes one stage further in allowing you to use either Amiga disks or PC disks in the same drive, and to save or read files on to or from those PC format disks. So you can work on stuff at home, save as Ascii on to a PC disk, and take it into work the next day.

Simply auto-booting with the Messy Dos disk sets up the system for use, and there are instructions on how to incorporate it into your own versions of Workbench. When you come to read or write to a PC disk all you have to do is name the drive as MS0: or MS1: for example.

The clever part is when you save a file on to an Amiga disk, stick a PC disk into the same drive, and save as Ascii on to that. If you swap between the PC and Amiga with any frequency this is a very useful utility.



PC to Amiga transfers are a doddle with Messy Dos

Mental Image Games 1

Disk 1777 – Virus Free PD

Three games for the price of one: a bargain, you might think. A bargain it would be if any of the three bore playing more than a couple of times. Alas, only one of them does, and it has a serious flaw.

The games are Gridrunner – not the version released by Llamasoft during the last couple of years – The Invaders and Rebound. First up is a nifty title

page, some average music and the choice of games. Gridrunner is based on that ancient classic Centipede, but with mobile guns down the side and along the bottom of the screen, shooting at you.

From the top, one or more centipede-type insects race, though the graphics are so bad they could be anything. Shoot a part of the centipede and it turns into a green blob. Unless you continue to destroy the green blob it will eventually crack open and fire at you.

That's it really. It's dull and boring, the graphics are dire, and the gameplay is repetitive.

So much for Gridrunner, the other two at least look smart. In fact, they look like games written by demo programmers. All flash and no gameplay.

Rebound is the only game on the disk bordering on playable. It's Breakout, turned on its side. Power-ups and special effects abound, but the annoying thing is the speed of your bat. It's just too slow to make skill the winning factor.

Never mind, at least it's almost there. The Invaders doesn't even come close. A sideways scrolling Defender-style game with two very flashy spaceships, an energy top up, homing missiles and mines, and bonus point icons are all the components. When you see the first lumbering spaceship bearing down on your homebase you think "hey this kid can program". Clever and skilful shooting will bring the alien down in a shower of exploding chunks and pyrotechnics.

Very nice indeed for PD. The trouble is that that's all there is to the game. You get lots of these spaceships on every level, which merely consist of more spaceships.

After you've cleared four levels stuffed full of just one style of alien ship you reach for the off switch in disappointment.

This is generally a good looking collection, but none of them qualify as good games, and only Rebound scrapes in to the average category.



The Invaders boasts flashy graphics, but is repetitive

Disk Master

Disk 1723 – Virus Free PD

Using Workbench for menial tasks or just the odd disk operation is fine, but when you want a little more information and a bit more power, and have a few more disks to process, a decent collection of utilities is a godsend.

The unoriginally titled Disk Master sports a very clear front end, listing the main functions down the centre of the screen, with the contents of one drive down one side, and a second drive down the other. Initially, the left side is designated as the source and the right as the destination, for copying files, but this can be switched around with one click.

The main functions are Copy, Delete, Rename, Make Directory, Select All, Clear All, Read File, Show Picture, Play Module, Info (length in bytes and blocks plus whether there is any protection or not), Print File, Hex Dump, Print Directory, Add Protection to a file, and Execute a file.

That's just the ones in the centre. The mundane functions such as Format – with or without verify – Verify Disk, Virus Killer, Block Editor and Disk Copy are on a separate screen.

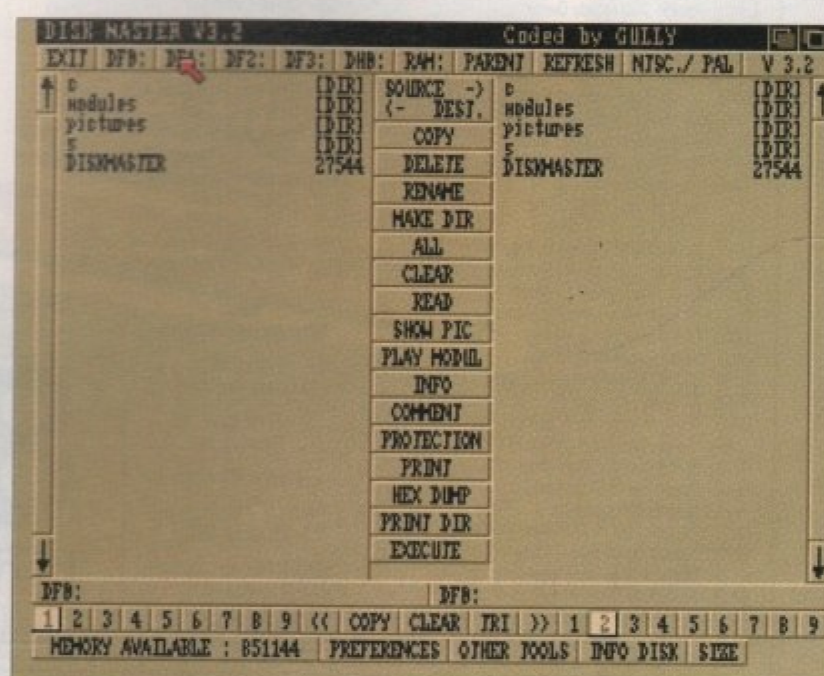
All the functions are easy to use, and you can specify which device is being read or written to in any order. I liked the Show Pic option since you can scan through a demo disk of digitised pics say, see which are the good ones and copy them.

What makes this set of utilities valuable is that the disk auto-boots straight into the main program. There's no messing about with title pages, just go straight in there, select what function you want and the job is done.

> *The graphics are so bad they could be anything*

There are a couple of related bugs to avoid that are annoying since they are fairly obvious. If, when selecting functions like Make Directory, you don't enter a new directory name but just click on the Close Window gadget – which activates the function rather than cancelling it – the program crashes.

Not providing exits from a couple of the functions, and then crashing when you try to get out isn't too hot, but apart from that these utilities are fast, friendly, clearly laid out and useful.



Disk Master 3.2's front end is very well organised

Air Ace II

Disk 1765 – Virus Free PD

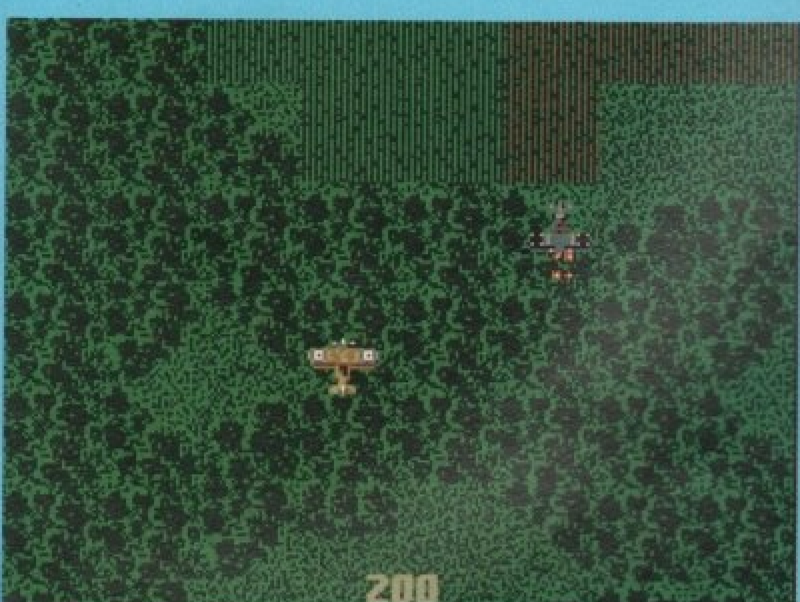
When Palace released the original C-64 version of SEUCK, it was a cracking good program, only lacking in the facility to include power-ups and extra weapons.

Not enough memory, said Palace. Aha, we thought, the Amiga and ST versions will soon see to that. But they didn't, because then you the man – or woman – in the street might create something which would embarrass those software houses charging £25 a chuck for their games.

And so the Amiga and ST SEUCKs were a disappointment, and having ploughed through a pile of dismal games created with the things, I wonder why Palace was ever worried in the first place. Air Ace II personifies everything that is bad about unimaginative games created with SEUCK.

The sprites are small, the backgrounds are anonymous, your plane moves like a slug, the enemy's bullets move too quickly, there is damn little intelligent game design. And the sprite detection, if you'll pardon the pun, SEUCKs.

I've had more fun stapling my thumb than playing this tat. A nice idea with the World War I approach, it just goes dreadfully wrong.



Not the most inspiring game ever written

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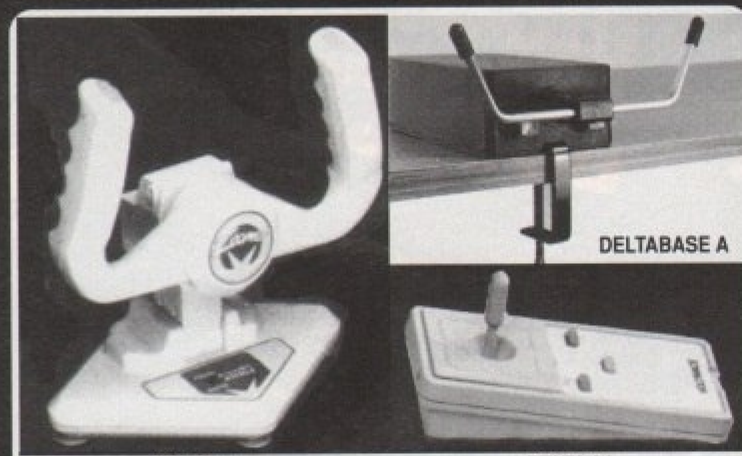
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AMIGA COMPUTING GRAND GRAB

THIS MONTH'S PRIZE

Last month every copy of *Amiga Computing* featured a unique GRAND GRAB serial number. The panel below contains 500 randomly selected winning numbers. If any of these match the GRAND GRAB number on your personal copy of *Amiga Computing* issue 41, you are already well on the way to winning a **Golden Image hand scanner** or one of **eighty top games** from Kixx and Gremlin.

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11857	14111	20400	29988	32364	38991	46222	53987	88789	94876
11954	14156	20631	30056	32485	38234	46573	54739	89234	95453
11976	14264	20881	30146	32499	38456	46789	54876	89542	96494
11988	14364	20991	30295	32576	38785	47234	55453	89550	98634
12056	14485	21234	30376	32663	39001	47332	56494	89771	99748
12146	14499	21456	30390	32667	39273	47550	60634	89991	100832
12295	14576	21785	30454	32756	39588	47771	62748	90133	100993
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12390	14667	22273	30554	32864	39740	48133	64993	90435	101888
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12487	14769	22711	30647	32954	39876	48435	65888	90774	102765
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12612	14888	23765	30753	33165	40342	48774	66762	90458	103113
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13487	17265	26932	31611	35777	42445	53421	78788	93487	108789
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- If your GRAND GRAB number from *Amiga Computing* issue 41 (October 1991) matches any of those listed above, carefully complete your claim form.
- Photocopies of winning GRAND GRAB number panels will not be accepted.
- The first two fully completed GRAND GRAB claim forms to be drawn from the compiled entries on Thursday November 7, 1991 will each win a Golden Image Scanner. A further 80 winners will pick up great software prizes from Gremlin and Kixx.
- All remaining winners will collect various runner-up prizes including software, *Amiga Computing* subscriptions and T-shirts.

The prizes



Get scanning

Break into image processing with the help of *Amiga Computing* and Golden Image. Two lucky readers have won a superb 400dpi hand scanner from Golden Image. Check the number panel on this page and find out if one of them is you!

Games galore

Thirty lucky winners will collect copies of Gremlin's smash hits HeroQuest and Switchblade 2, with an additional 50 winners collecting some classic games software courtesy of Kixx.

GRAND GRAB claim form

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Question:

What is the is the name of *Amiga Gamer's* News section?

(a) Upfront ☐ (b) Onword ☐ (c) Newsbeat ☐

Send this completed coupon to: GRAND GRAB CLAIMS, *Amiga Computing*, Europa House, Adlington Park, Macclesfield, SK10 4NP.
All entries must be received before Thursday November 7, 1991.

LAST MONTH'S DRAW



Last month we performed another GRAND GRAB draw, revealing the lucky winners of ten copies of Wordworth from Digita.

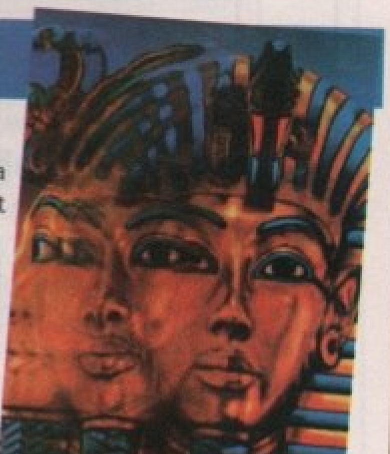
Congratulations to Paul Ferry from Derry, Nicky Scott from Worsley, E. P. Penszor from Grimsby, Yasin from Dublin, S. Edwards from Coseley, J. Manson from Cheshire, A Stevens from Liverpool, E. Gerrard from Harrow, S. Jones from Hackney Wick, D. Childs from Portsmouth. Well done to you all, Digita will be in touch soon to arrange delivery of your prizes.

NEXT MONTH'S GRAND GRAB EXTRAVAGANZA

Thanks to *Amiga Computing* you can get arty with DeluxePaint IV from Electronic Arts, or relax with some games glassics from Mirror Image!

What's up grabs?

DeluxePaint IV



You heard about it first in *Amiga Computing* a couple of months ago and now it's here at last.

What are we talking about? Deluxe Paint IV of course! This 4096 colour upgrade from Electronic Arts is the most eagerly awaited graphics software release for months.

No serious artist can afford to be without Dpaint IV and *Amiga Computing* will be giving 15 copies away next month.

A games grab bag from Mirror Image

Do you remember Amiga classics like Carrier Command, 3D Pool, Waterloo and Rocket Ranger? Well those awfully nice people at Mirror Image are giving these excellent games a new lease of life at a very affordable budget price.

We are going one better though! Thats right, next month *Amiga Computing* will be giving away fifty Mirror Image classics totally free. All you need to do is keep this copy of *Amiga Computing* safe until next month.



1. *Amiga Computing* GRAND GRAB is open to all readers with the exception of *Europress Group* employees, agents and advertisers.
2. Each claimant MUST complete the skill question on the GRAND GRAB claim form before their entry becomes valid.
3. The main GRAND GRAB prizes will be awarded to the first three claimants drawn from assembled entries on Thursday November 7, 1991.
4. All remaining claimants will receive unspecified runner-up prizes.
5. *Amiga Computing* reserve the right to substitute prizes without notice.
6. The editor's decision is final and no personal correspondence can be entered into as a result of a GRAND GRAB claim.
7. All successful claimants will be listed in future issues of *Amiga Computing*.



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UTILITIES

U001	A-Gene (1 meg)	Trace your ancestors
U003	Alpha Flight Demo Creator	With Instructions
U005	Amibase	Excellent database system
U006	Amigazer	For those astrologists
U011	APDL 71	3D Art, iconmaker, etc
U012	Anti-virus disk	Useful Killer
U014	Batmania	Batman's alternative workbench
U016	Biorhythms (1 meg)	Chart your feelings
U017	Business pack (3 disks)	D/base,S/sheet,W/P
U020	C-Manual (3 disks)	Guide to C-programming
U024	Catalogue Maker (2 disks)	Good; be patient!
U032	Enable	Puzzle creator
U033	Education 1	Learn German
U035	Education 3	Weather
U039	Flexibase v2.0	Popular database
U092	Cartoon Brushes	Lots of famous characters
U043	Intromaker	As it sounds. Good
U045	Jazzbench	Another good W/B alternative
U049	Mandlebrot Explorer	Excellent piccies
U050	Master Virus-killer	Recognises over 100 viruses. Essential
U052	Business Card Maker	Simple, but useful
U053	North C	Compiler
U061	Games Music Creator	Fav. composition writer
U062	House Samples 1	Loadsa samples. Suitable for GMC etc.
U063	House Samples 2	More of above
U073	Sid v1.06	Cli helper. Very popular
U075	Spanish Tutor	Bueno!
U076	Star Trekker	8 channels, sampler. Superb
U083	Workbench Fun!	More W/B alternatives
U084	Wordwright	For all you dizlecksicks!
U089	Journal	Very good account-handler
U090	Text-editor	Also text-paint
U091	Chet Solace	Utils. extravaganza plus game
U093	Jamcracker	Songcreator from Vision. Well presented
U094	Times No.3	Good P.D. disk-mag
U096	Zine No.9	Another magazine. Good stuff
U097	Red Sector demo-maker	Recent. Exc. disk

DEMOS

D001	Alcatraz Megademo (3 disks)	Superb intro & graphics
D004	Amaze	Revolutions
D006	Anarchy Music Disk	Catchy stuff
D010	Animations '91	3 anims, including rocking chair
D012	AMOS Game creator	Demo of AMOS's capabilities
D015	Agatron Star Wars (1 meg/2 disks)	Captivating graphics
D016	Acid Music	Some wicked museec & grapheecs!
D017	Addams Family	Slideshow of TV series
D020	Bowie Demo	David Bowie of the past
D022	Budbrain Megademo (2 disks)	Still one of the best disks around
D021	Budbrain 2	The equally briliant sequel
D023	Bass Megademo	Electrifying graphics & pulsating beat. Get it!
D024	Batman	The movie animation
D027	Beastie Boys	Excellent presentation
D032	Cheap-o-prodn	Funny cartoons
D033	Cokeman/Smurf anim (1 meg)	high-res animations
D036	Coma/Cebit/Victory (1 meg)	Classic Acid-type demos
D037	Cool Cougar (1 meg)	Classy cartoon
D041	Congaman (1 meg)	Bongo player anim.
D048	Dream goes Berserk (1 meg)	Astounding graphics & imagination
D049	Desert Island slideshow	Gruesome pics. Good
D051	Dragon's Lair 2	Preview of game
D057	Donald where's you trousers?	Tuneful ballad
D058	Enterprise leaving dock	Famous animation
D060	Elvira	The sexy lady endows herself !
D061	Elvira Activities	Now move her body !
D062	5 Ways to kill a mole	Funny. Not for animal lovers !
D063	Fillet the fish	The possible sequel to Puggs. A must
D064	Fraxion Fantasy	Gothic slideshow
D067	Fraxion Horror	Chain-saw macabre cartoon. V. popular
D069	Franklyn the Fly (1 meg)	Long cartoon on cute little Franklyn
D075	Girls of sport	Pretty shots of talented girls
D078	Goldfire ultimate fx	Excellently produced. Watch those bobs!
D082	Holsten Pils	Demo reproduction of ad.
D083	Home & Away	Down-under disk
D088	Iris demo	One of the best demos I've seen
D092	Iraq demo (1 meg)	Topical cartoon. Bush meets Saddam! Bang!
D099	Jesus loves Aciid	Mindblowing music and graphics
D103	Legend of Billy the Kid (1 meg)	Long-running animation. Good
D106	Madonna cartoon anim.	One for the fans
D114	Mike Tyson anim.	Well compiled
D117	Magician v2.0	Recently appraised animation. Recommended
D125	Napalm Death	Slideshow & music from these...er...musicians
D126	Neighbours	Slideshow from Ramsay Street
D128	Punk croc crew megademo	Now see Jason get shot! Ha!
D129	Puggs in Space	Brill cartoon. Puggs finds it's a different world
D131	Pussy : Innership	Demo, Music, Game. Recommended
D132	Phenomena demo.	Top-quality demo
D143	Ray-traced pics	Some lovely pictures. Loads off W/B
D146	Red Sector megademo (2 disks)	RSI's classic
D148	The Run (1 meg)	T. Richter's car-chase animation. Good
D151	Real Thing's 'Birds'	Lovely graphics from RGB studios
D154	Subway Clapping World	Music & graphics. Oldie favourite
D162	Stealthy Manouvres (1 meg)	Excellent demo
D166	Star Trek Animations	Anims. of USS Enterprise
D177	Star Trek Animations	Agatron no.17 More like above. Good
D184	Treacle megademo (3 disks)	Some quality demos here
D189	Viz slideshow	Fat slags & others in this slideshow
D191	Ugly Mug	Anim. of a spinning mug. Good presentation
D197	Trash Pack No. 1	Good music & intro from Amega
D200	Silents Bluehouse (2 disks)	Game, demo & great music. Excellent
D201	Sickness simulator	Amusing sounds such as farts, belches etc.

MUSIC

M001	808 State remixes	Four good tracks
M002	100 C64 tunes	Faves from the Stoneage machine!
M004	Abercrombie's	Original compilation
M006	Batdance remix	Really good disk. Catchy stuff
M010	Bachbusters	An alternative sound to composer's version!
M013	Crusader's Bacteria	Excellent production from the music maestros
M016	Depeche Mode	8 Tracks of reasonable quality
M023	Digital Concert 2	Flash prod'ns. First of five compositions
M028	DJ Disco Leif's Hits	Really good presentation and beat
M032	Godbrain loves the world	Great acid-house musak
M038	Hugo's Excentria	This has to be one of the best house disks
M039	I Love Technology	Recent production from Beatmaster. Good
M041	Kefrens Jukebox	Good presentation and lots of tunes
M052	Original Rips 3	Compilation of the best PD music
M057	Powerpack 3 (1 meg)	Includes Vanilla Ice track
M062	Random Access	Art of Noise and more. Startling acid track
M063	Special Brothers	The Last Intention
M066	Sydney Youngblood	Sample of perfect clarity. Worth a listen
M068	Sound of Silents	7 songs from Silents
M075	True Energy	Another Silents disk. One of their best
M078	Zee's Hip Hop disk	Slightly aged now, but good music

GAMES

G001	Autobahn 3000	Control ball through tunnel. Hard
G004	Airwar	Fighter simulation. Good shareware game
G005	All New Star Trek (2 disks)	USS Enterprise classic. Best one
G008	Balloonacy	Destroy city from balloon
G010	Breakout	Classic bat & ball game
G011	Blizzard	Horizontal shoot-'em-up. High quality
G013	Bullrun	War-game, based on US Civil War. Control army
G014	Adventure Solutions (2 disks)	Loads of hints of commercial games. Good
G015	Crossfire (1 meg)	Excellent game written in AMOS
G019	Dungeon Delver (2 disks)	Difficult adventure quest
G021	Demolition Mission (1 meg)	Similar to Balloonacy, good fun
G022	Escape from Jovi	Guide ship to safety. Simplistic graphics
G029	Flaschbire	Old favourite. Get to alarm clock
G031	Gravattack	Control spaceship, picking up keys
G038	Jeopard (1 meg)	Risk-type strategic game
G040	Holy Grail (1 meg)	Text adventure
G042	Kill to Free	Simple SEUCK game
G043	Learn and Play 1	Good for the kids. Blackboard maths. etc.
G048	Lame-ST-Ports	Shoot down those Ataris!
G050	Master of the Town	Use mouse to smash windows. Very addictive
G049	Megaball (1 meg)	Excellent game. Improved version of Breakout
G055	Mechforce	Strategy game
G056	Monopoly	Board game on disk
G059	Nethack (Fish 460)	Good adventure game, recently appraised
G061	Pick up a puzzle (1 meg/2 disks)	Fit the pieces. Good for the kids
G062	3D Pool	Control cue with mouse, and it's all pot luck!
G063	Pacman	The classic game still here
G065	Pixie Kingdom (2 disks)	Tricky adventure game. Good
G072	Star Trek : Next Generation	Not as good as G005
G077	Seven Tiles	Excellent speedball game from Alpha
G079	Treasure hunt	Find the hidden treasure. Good graphics
G081	Trek Trivia	Test your Star Trek knowledge
G083	Wooden Ball (1 meg)	Score three goals to win
G084	Wet Beaver Tennis	Simple, but good fun bat & ball game
G086	Wraithed One	Good general knowledge quiz
G088	Pair Crazy	Match the piccies
G094	Zeus	Simple puzzle game
G096	Assassins games comp.	Very good. Includes Tanx and Amigoids
G098	Battleforce	Control battle of robots
G097	Tomptespelet	Speedball game

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In your face...

PRIZE LETTER

I'm going to take you on a mystical journey, back through time to a place in history that will illuminate your soul and light your life with happiness (hang on a minute, this belongs on a Enigma LP!!).

I'm actually going to take you back a couple of months to the June issue of *Amiga Computing* (I bet you're all thinking, tut, urrr, is that all?). Anyway, that issue with the piggy bank on. The front had a yellow box on page 33, and in it was the Tune of the Month section, plus a ramble on how you should create MED songs: "It's all too easy, when using a tool like MED, to fall into bad habits and produce music that is repetitious and bland....there can be little excuse for lazy composing."

This is excellent advice and all of which is completely thrashed three times over (and again for luck) by September's Tune of the Month, (or Crud of the Month), "pH-1". Er, I can only ask... what happened? What factors influenced your infinite and divine Amigan wisdom into choosing such blatant magnetic mush? I have been cogitating my brain cells on this for some time – using the Amiga powerpack to make some toast in the bored moments – and I've devised five possible solutions:

1. It was the only tune sent in.
2. The person who chose it had (a) a hangover (b) fallen asleep (c) a big distortion in his/her ear-lobes (d) had been held to ransom by a *CU Amiga* virus.
3. You were simultaneously listening to the complete works of Stock, Aitken and Waterman.
4. You accidentally played it backwards therefore making it sound much better.
5. You only did that because you'd had so many original and totally c**p entries at the same time.

I know you are looking for original pieces of music, but this one was definitely – and without buttering my crumpet – a flop on a floppy. Still, that's not the end of the world, and I've loved every other Tune of the Month so far (the composer of ED209 & Friends deserves a credit!). Anyway, I have to go now as I'm flopping all over the room (zits, you know!).

Eddie Talbot, Rugby

There is just no pleasing some people, is there? At *Amiga Computing* we try to pick the best and most original tunes from the submissions pile. Believe you me, there is much, much worse that doesn't make it to the disk!

We also aim to differ the tune each month. As an example, for September's tune we provided you with pH-1, an 808 State bleepy kind of tune which although not particularly melodic was most definitely original.

We are a reasonable team here at *Amiga Computing* and the message is simple – If you can do any better then stop writing and start tapping those keys! If it's any good, it just might make its way onto the best coverdisk in the business.



3D Master

It's brill. It's fab. It's fandabadosy. What am I talking about? 3D Master of course. I have been using an Amiga for years now, and as such I was beginning to get a wee bit bored (well I do use it every day) so I've been looking at the world of ray tracing. I used the Real 3D demo disk on the Amiga Computing mag and I thought it was a bit too much (including the price), so when I saw the Senlac Software PD ad showing 3D master at £35 I thought "could this be what I'm looking for?".

A quick phone call to Senlac convinced me to buy it without trying the demo version. Order placed at 2.30pm and I received it at 7.00 the next morning. Now I have no experience with ray tracing and can't draw for toffee but within an hour I was drawing (dull, shiny, mirrored) balls, boxes, triangles, changing the angle of view, putting lights in the sky and then ray tracing. It's so bloody easy. One feature I do like is that you can edit anything at any time.

It is the best editor I've used in any package. Rendering is very fast, taking only minutes to do a picture, so do not think it's PD, because it's not. The author Martin Staley has done a very good deed indeed by giving us this little gem at such a low price – it's worth much, much more.

So do the right thing and support him, as he will update the package and I believe when he does you will be seeing 3D Master as the best ray tracing package at any price.

Phone up the awfully nice people at Senlac, on 0424 445498, and order 3D Master now...you won't be sorry.

Michael Alien Thornton, Worcestershire

There you go! If you are into shiny mirrored balls, take Michael's advice – get on the phone and ring Senlac now. Mind you, with a middle name like Alien would you actually trust this man?

Credit where it's due?

I would like to add my thoughts to the current Porno Domain discussion. Although some find pornography unpleasant, the same can be said of smoking. Whilst not a hedonist, I find it unacceptable for adults to condemn other adults' self-indulgence if conducted in private with other consenting adults.

Although children obtaining pornography is dangerous as it may distort their views regarding love and sex, I think that dirty PD is the least of the moral pitfalls facing the young. I don't base my opinion on the simplistic "violence is worse than sex so don't worry about pornography" argument, but you see my point.

To protect the young I suggest that PD libraries only supply "Adult" PD to credit card sales – children don't have them and if they do use their parents' cards, it can be detected. However, in a free society adults must have the right to choose. I am not saying pornographic PD is good – or bad – but you pay your money and make your choice. Anyway, thanks for the forum on this topic and for producing the best Amiga specific magazine bar none.

Roland Casewell, Birmingham

It's an interesting idea, only letting "over 18" material be sold to credit card customers. The question is, are you not restricting peoples' right to choose if they don't happen to have a credit card?

I must admit, it does sound like a quick and ideal way to stop kids getting their hands on the pervy side of PD.

WorkStation winner

I am writing to say how good "WorkStation" is. I thought, could this be as good as everybody claims in your letter pages? Well I tested it and I think it is better than I could ever imagine. I mean, I thought those flashy icons which changed from one picture to another totally different frame were too advanced for the likes of me, but they are just so simple to do with Iconmaster.

The SID program is brilliant, although I can use Shell and CLI it is all much easier using SID. Work which takes two hours in CLI or Shell will only take a quarter of an hour.

Screen X is very useful, and so is that small utility called Zoom, which will get rid of your mouse pointer to save memory, and is easily retrieved by nudging the ➤

mouse. Why sell this software so cheaply? This could be a £30 effort, like Workbench, or maybe even more.

I would like to say "thank you" for selling it to me, and "thank you" for that page in your magazine each month. I would also like to say "goodbye" to Workbench 1.3 and hello WorkStation.

Finally, how do you format text as bold, italic or underlined using the QED text editor? If it isn't possible, could you suggest a goodish PD wordprocessor, and where to get it from?

Justin Brett, Bradford.

Thanks for your kind words about WorkStation, it's good to hear that it is proving useful.

In reply to your QED question, I consulted Paul Austin, our WorkStation expert, and he says the QED text editor can't format text as bold face or italics because it is essentially a text editor and not a dedicated wordprocessor.

The PD wordprocessor that I suggest you get is Text Plus which can be obtained from Softville PD or any other large, well stocked PD library.

We don't charge £30 for the WorkStation because we aren't out to make a massive profit from it. We just wanted to compile the best PD utilities around onto a useable disk – with decent documentation. By all accounts it has been a great success.

The *Gamer*'s up

It is my opinion that all your games tests should indicate the following

1. Is the game hard-disk compatible?
2. Is the game fully OS 2.0 compatible?
3. Does the game take advantage of power accelerators eg.the 68030 processor?

Unfortunately most games released for the Amiga do not fulfil these requirements. I think that it's your responsibility to inform about any advantage or disadvantage of any piece of software. Also in my opinion the game rating percentages in *Amiga Computing* are way too high. You cannot give every game 90% ratings...yes I know you depend on software companies' advertising, but please try to rate games a bit more seriously.

Stein Erik Giske, Norway

Dear oh dear, we can't seem to get much right can we? We think every game is utterly brilliant and assume that not everyone has items up to the value of a small family car stuffed inside their Amiga.

Seriously though – if you can be serious about games – we are now into issue two of *Amiga Gamer*, the mini-magazine which tells you what games are really like. You will notice that we aren't over-generous with the scores (ask Hawk software what they think)

A great many readers assume that we will give a game a really high score in order to get its advertising. That is not how it works. Look at some back issues of *Amiga Computing*, find the highest scoring games and then search out the adverts. You won't find any.

***Gamer* indicates how much memory a game uses. If any games support hard disks or accelerators we will tell you, providing the software houses tell us.**

Ezra online

Ezra Surf can be contacted on a whole host of bulletin boards and conferencing systems. If you have anything to say, get it off your chest online!

Amiga Computing now also has its own Fidonet echo which is being carried by BBS systems up and down the country. Any Fido sysops interested in hooking up should contact 01 for Amiga to receive this echo.

Additionally our mailman with the most, Ezra Surf, hangs out on the following services:

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Telecom Gold	74:MIK911
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The Direct Connection	uad1132
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Stick it!

How many of you discard your broken joysticks? Well here is a tip for two fire-buttoned "stick" types. If you find one side becomes broken, dismantle and swap the microswitch from one fire button for the broken one. Result is one working joystick, cost – nil.

This tip came about when I broke my joystick over Christmas. Thanks for a great magazine.

James Abram, Wolverhampton

I can spot a slight, teeny, almost insignificant snag. If you swap switches you will be left with a mirror image of the knackered joystick you had before you started.

Not too bad if you always tend to use one particular fire button I suppose. If your stick drops dead is it really such a big deal to fork out around a fiver for a brand spanking new one?

Snapped poker

I am writing to you because perhaps you can save my life. Whilst tidying my husband's desk I dropped one of his disks but before I realised it I trod on it.

It snapped. I haven't told him yet because I am hoping you can replace it. It came from your *Amiga Computing* magazine dated March 1991 Issue 34. I hope you can replace this as he enjoys playing Klondike.

Mrs A.Tuccio, Surrey.

We wouldn't do this for anyone Mrs Tuccio but, because your husband loves playing Klondike and we wouldn't want you to get in trouble we'll send you a copy in the post.

If your home should ever be ransacked by a herd of athletic elephants stampeding over your entire collection of *Amiga Computing* disks, all you have to do is order a back issue from Europress Direct. The order form can be found near the back of the magazine.

Shareware accounts

Following on from your Business Round-Up article in the September issue, I would like to bring it to your attention – and hopefully get a bit of free advertising! – that there is in the Shareware area of the PD market a program called BMS Professional that I have coded to:

(a) assist me in running a PD library, and
(b) hopefully help others to do a similar thing.

It consists of several modules, all fully integrated, and capable of handling up to 100 accounts, 50 stock items, 3 VAT rates and so on. Anyone interested should drop a line to JirmSOFT PD at the address given.

Can I congratulate you on producing the only Amiga specific magazine worth buying – but can we please have the advertisers index back?

Iain Roy, Pickering

If anyone wants BMS Professional then write to Iain Roy, JirmSOFT PD, Flinders, 7 Western Way, Pickering, North Yorkshire, YO18 8NP. On the subject of the advertisers index, it is at the back, compared to, say, the contents.

Two's company...

I am writing in reply to Colin Brown's request for help. It was a surprise to see that someone else had bought a CDTV from Dixons in Perth. I fully sympathise with the lack of software – I had two weeks with a welcome disk that told me of all the amazing wonderful titles that were going to be available...eventually.

There are rumours going around that you can attach a standard Amiga keyboard to the CDTV. I phoned Pizaz! in Dunfermline to ask them about the article in the August 3 edition of New Computer Express and they said that it wasn't as straightforward as plugging in the keyboard, but they were working on the problem. No doubt Pizaz! will come up with a solution by the time this letter is published, while Commodore will still be pretending that the CDTV is not a computer.

Now that you know you have at least two readers with CDTV's maybe you could bear us in mind when you're making up your coverdisks. I've not had any problems with them yet but could you please avoid asking "Y/N" questions if you can. A few reviews of the software titles would be nice too.

Frank Senyszak, Perth

Two readers don't make a magazine, but your heartfelt pleas do not go unnoticed. We now have a regular Multimedia column which by happy chance, has already explained how to connect an Amiga keyboard to the CDTV.

As for CDTV-friendly coverdisks – we always do our best to make sure that our disks work with as many machine configurations as possible and we will strive to ensure that CDTV users aren't left out in the cold.

Write away!

Got something to say through the pages of *Amiga Computing ?*

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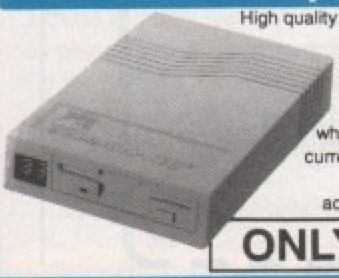
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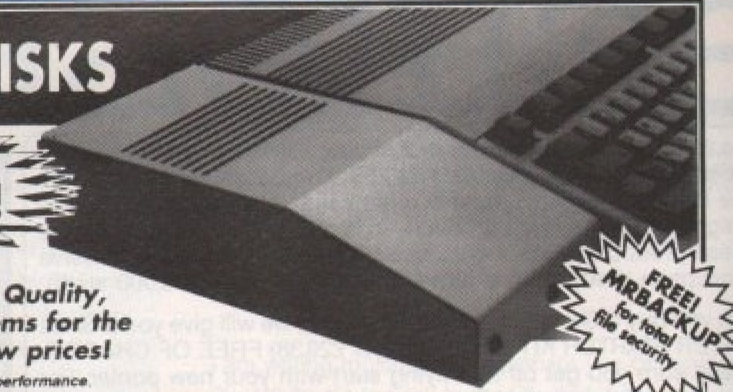


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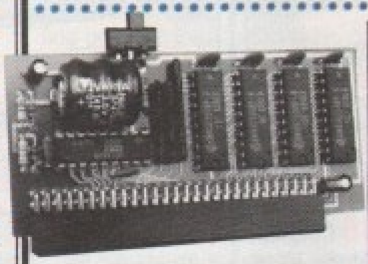
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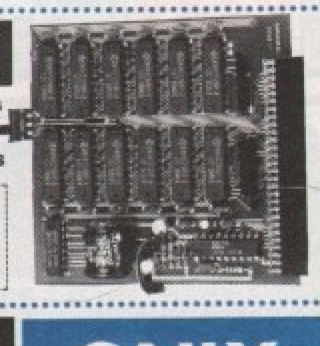
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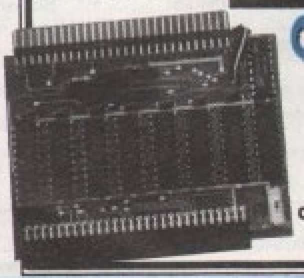
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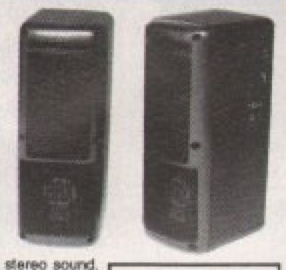
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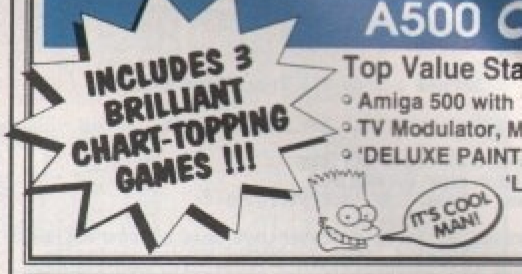
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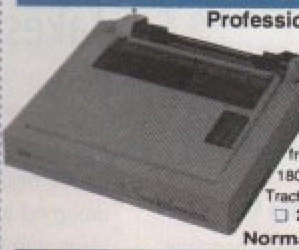
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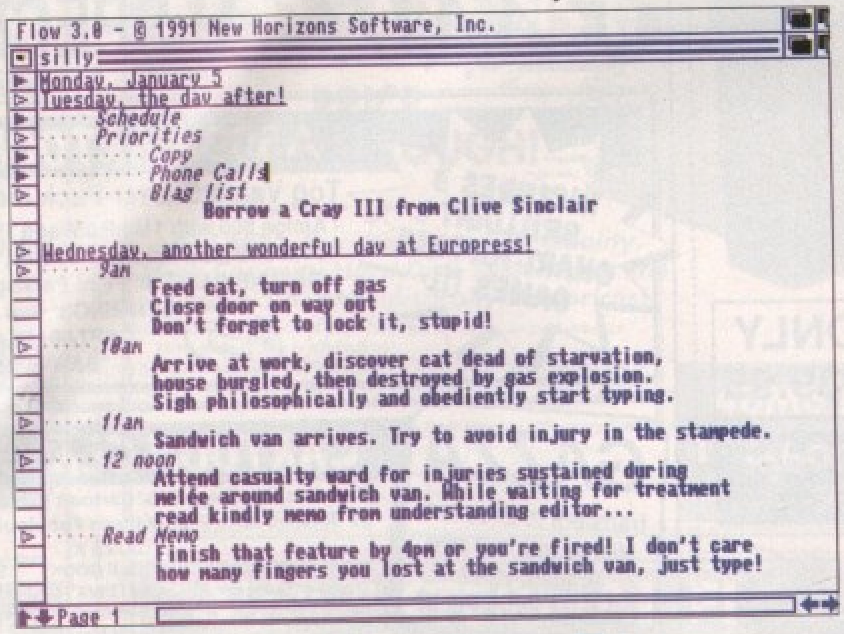
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Go with the flow

Can you order your thoughts with an ideas processor? Stevie Kennedy takes a look

Forget all that scribbling rough outlines on scraps of paper, and sketching in ideas as they pop out in chaotic fashion. With an ideas processor, so the theory goes, you can neatly organise anything from a rough schedule to an entire book, and by controlling the creative process arrive at the finished product in a structured way.



New Horizons' Flow, now in its third version, is a fairly straightforward piece of software. In operation, it works just like a wordprocessor, except instead of lines you have potential headings, leading in to sub-headings, and so on.

To start a project, a main heading is required. For, say, ideas on a management seminar, this could be "Day One". To add sub-headings, you simply press Tab to indent the next heading. Carry on in this way, and you can define headings to a depth of twenty levels.

Day One's first sub-heading could be "Morning Session", and could include a list of its own sub-headings such as "Discussion Topics", "Methods", and so on. By double-clicking on any heading or sub-heading, it is expanded to show the next level of headings, and by double-clicking again, it is collapsed.

House of cards

It follows that when a screen becomes cluttered by all of these sub-headings, it is an easy task to click on the highest level of heading – the main heading, Day One – and collapse the whole project back down to one line of text.

You needn't stop at one main heading, of course. There's always Day Two and Day Three, not to mention "Sobering up on the train home before the loving partner realises your residential management seminar was nothing more than an excuse for a giant booze-up". Easy as pie.

The beauty of a program like Flow is the extent to which a simple initial layout can be extrapolated through various sub-levels until a full outline is generated.

The ease with which this is achieved by Flow is rather deceptive, however, as you could be forgiven for thinking you're using little more than a wordprocessor with collapsible headings. That's because Flow is just that – it is designed as a structure into which your ideas will "flow". All the hard work is left to the user, who must supply the ideas in time-honoured fashion. Where the program departs from its appearance as an electronic scribbling pad is in its simple yet highly organised structure.

I found using the program extremely easy, and was fairly surprised when I ended up with a tightly constructed set of ideas for future articles. Even better, when I wanted to go back through the outline in search of a single idea, Flow's wordprocessor facilities came into their own.

The Search function is fast and will find any word, no matter how deeply nested in sub-levels, a lot quicker than I would have been able to rummage through my doodle-infested notebook. The 50,000 word spell checker – with American spellings, unfortunately – is the same as that supplied with QuickWrite, and is slower than I would have liked, but as it will only be used when an outline is to be printed for someone else's benefit it doesn't let the package down too much.

Edited ideas

I found particularly useful the program's capacity to grab a heading at the highest level and drag it up or down the list of headings, taking all its sub-headings with it. In this way, whole schedules can be rearranged with a mouse drag in a few seconds, or your outline can be laid out in a more logical manner.

By opening up to four outlines at once, it is also possible to cut and paste entire sections between them. If, for example, you have a separate project for the second day of your management seminar, but wish to re-schedule the 10am slot so that the two days swap over, you can cut and paste from Day One to Day Two, and vice versa.

This sort of post-idea re-working is the sort of exercise which normally results in your notebook becoming completely covered in arrows, circles, exclamation marks, and comments like "maybe swap 10am slots". With Flow, the change is accomplished the minute you think of it.

The program also has the invaluable ability to automatically number headings and re-number them if dragged to another location. This means you can generate lists and re-order them to your heart's content safe in the knowledge that the list is always in the correct order.

For lovers of officialdom, Flow's numbering options also include the chapter-section-paragraph standard to be found in all long and confusing documents. If you really want, you can generate outlines to baffle even the most hardened insurance salesman!

I was a little disappointed to find that Flow's Search function can't handle a search for a numbered paragraph. You cannot, for example, tell it to look for paragraph I.A.1.(c), as the numbers are scattered around tagged on to the beginning of their respective headings. As they don't appear together in the document, the search function doesn't pick them up.

You can jump to the page of your choice, of course, but as Flow is organised far more on the basis of headings and sub-headings, the lack of a decent "go to section" option is a major omission.

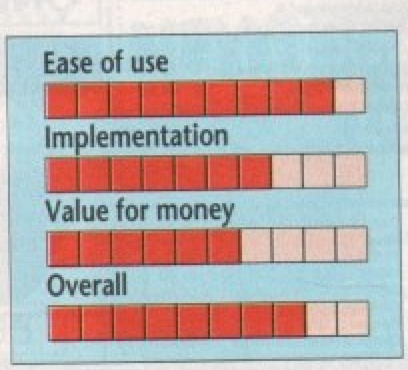
More macros

Yes, you guessed it – Flow is ARexx compatible. You can define any number of macros, ten of which are available from a pull-down menu, and send or receive commands via an ARexx port. As just about everyone and his dog seem to be using ARexx these days, and as it can, with practice, be a powerful tool, its inclusion is a welcome sight.

Conclusion

Flow is a useful package which, after a short time, can surprise you by how much it helps your thought generation and organisation. It won't have the ideas for you, but it is an ideal tool to apply to them once they've struggled from your over-burdened brain.

For the money, it could offer a bit more, and is a fairly expensive alternative to the good old spiral bound notebook, but if your business involves a lot of work based around a developing idea, Flow would make a perfect complement to your planning process.



Flow is a product of
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MORE CLASSY ANIMS .... good quality
POGO (1.5meg) .... good anim with sound
RANDI BRAZEN (1meg) .... a bit x rated
UGLY MUG (1meg) .... very good digi anim
THE MAGICIAN (1meg) .... ray traced anim
STEVES ANIMS (1 to 5) .... very tidy work
FILLET THE FISH .... very amusing
AT THE MOVIES (1.5meg) .... brilliant
PUGGS IN SPACE .... cute little alien
ANTI LEMMIN (2 meg) .... got to be the best
TIRRENO (1 meg) .... good ray traced anim
THE STORY OF A VIRUS (1 meg) .... neat
CAR ANIM (1 meg) .... great graphics
THE GYMNAST (1 meg) .... ray traced & tidy

● GAMES ●

NESTOR .... very good card game
MENTAL IMAGE GAMES (1 meg) .... fantastic
ARCADIA .... good Amos breakout
AMEGA RACE (1 meg) .... get set and fire
MAHJONG .... nice gfx good game
THE HOLY GRAIL (1 meg) .... good adventure
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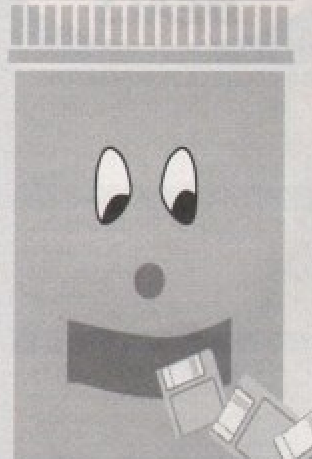
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DOLLY MIXTURE 2 .... more of the same
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BASS MEGA .... very good from France
SILENTS ICE (1 meg) .... nice one silents
ENIGMA .... good phenomena demo
REBELS COMA (1meg) .... brill classic
PULLING THE TRIGGER (1meg) .... love this
BLUE HOUSE (1meg) .... good demo and game
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REBELS MEGA II .... neat gfx
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DO THE BARTMAN .... sounds good
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FRACTAL FLIGHT II (1 meg) .... plays well
ACME MEGA (1 meg) .... very fancy
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NEVERWHERE .... neat demo from crionics
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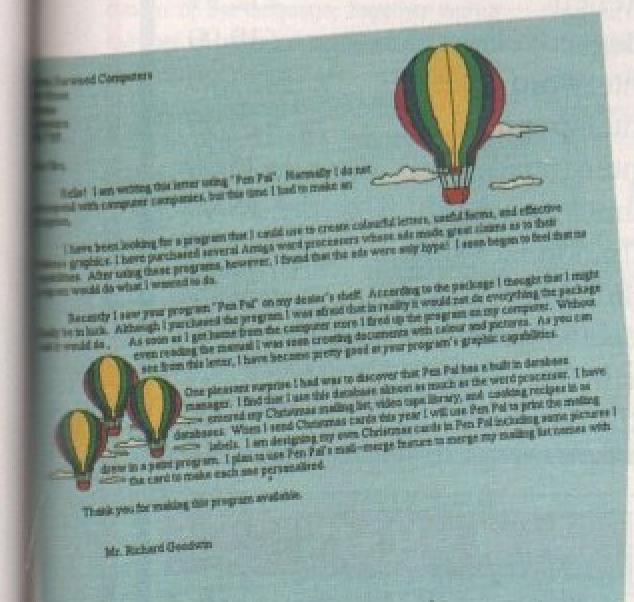
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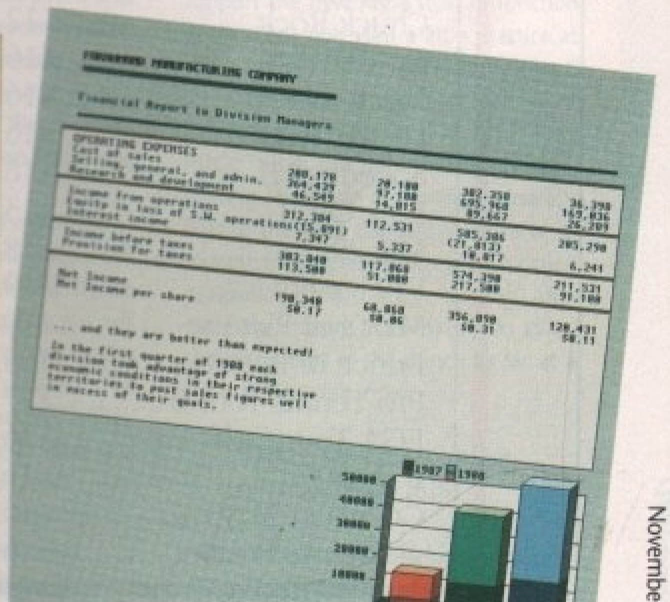
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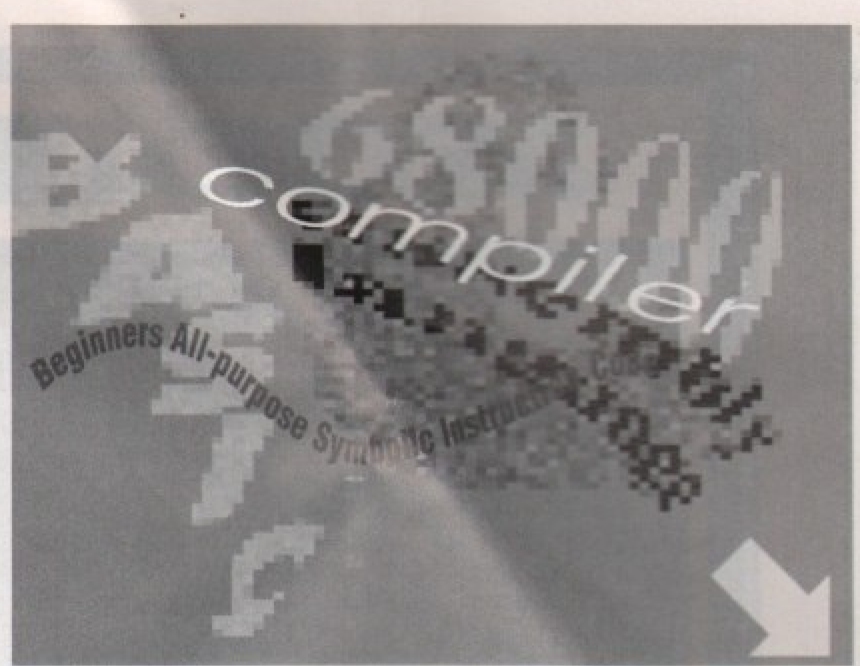
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How are standards maintained in C programming? Read on ANSI... Paul Overaa explains all

Minding the language

Although C itself is an easy language to learn, newcomers learning it on the Amiga frequently run into problems.

Why? It's usually because they attempt to tackle both learning about the C language and learning about the Amiga at the same time! Taken together these two things produce a lot of headaches and the easiest way to avoid this situation is to become comfortable with C before you start delving into the Amiga-specific world of Intuition windows, gadgets and menus.

The best way to do this is to start by writing simple CLI/Shell based programs which just use C's standard input/output functions rather than begin by trying to open Intuition screens and windows.

Within a few weeks you'll find that you come to terms with the general idea of writing the code, compiling and linking etc., and you can then concentrate on getting a decent understanding of C's pointer and structure operations.

These latter topics are vital and once a little experience in these areas has been placed under your belt you are likely to find that examples in the Amiga manuals, including the official Addison Wesley RKM reference manuals, will make quite a bit more sense.

One thing that should be mentioned to the aspiring C programmer is the business of ANSI C because, if you're new to C, you won't know about the big change that has occurred recently. Since C's birth there's been a defacto standard based on a book written by Brian Kernighan and Dennis Richie called *The C Programming Language* (affectionately known as K&R). Somewhat surprisingly there has not been an official standard.

The growing popularity of C, the creation of compilers by software houses who were not involved with the original design of the language, together with a number of other related issues led to the formation of an ANSI (American National Standards Institute) C committee.

Their objective? To look at the language, look at possible improvements which could be made, and to create an official standard.

The standard formally defines things that were only hinted at in the original definition of the language and it provides a number of alterations which make it easier for a compiler to check the validity of C source code.

For the first time it also specifies a set of standard function libraries which all new compilers will support. All of the major C compilers are already almost fully ANSI C compatible but the same is not true about the growing number of public domain offerings that are nowadays available.

The biggest difference is likely to be the way that functions are written and declared and, if you are learning C from a PD version of the language, you may in fact need to use function declarations based on the old style K&R C!

Many existing introductory C books, incidentally, are are based on a pre-ANSI, ie K&R style, version of the C language. In your early C days only the function-declaration/function-prototype orientated changes are likely to concern you – but it is as well to know that a number of other differences do exist.

A new dimension

The C world has quite a lot to offer the Amiga programmer, including two excellent commercial compilers...

Lattice/SAS C: This is the most expensive Amiga C compiler environment but you do get an awful lot for your money including the compiler, editor, linker, a powerful source level debugger and a collection of other programming tools. Throw in an assembler, all the Amiga header files, the massive Lattice/SAS function libraries and superb documentation and it doesn't take long to appreciate why this is the package the professionals tend to go for.

Manx's Aztec C: This is the other main commercial offering available for the Amiga. It also has many good points and, like the Lattice/SAS environment, comes with its own set of programming utilities (editor, librarian, debugger and so on). You get the Amiga header files, the very comprehensive Aztec function library and some good documentation.

On the public domain/shareware/anything-ware front there is now quite a collection of environments available. When you buy one of these compilers you will not get the official Commodore header files and this starts to be a problem once you get into Amiga programming proper. The header files are, however, available from Commodore for around £30.

So what choice do you have when following the non-commercial road? Here are some of the goodies that, for a few quid, can get you into the world of C programming...

Sozobon C: This Amiga version of the freeware compiler forms the basis of a number of offerings. It started life on the ST and the Amiga port seems to have been reasonably trouble free. Sozobon C is a K&R style compiler so you will not be able to use things like ANSI C's function prototypes.

Z C: This would seem to be a modified version of the above compiler. I've heard about it but have not personally used it – Margaret Stanger however did look at in the September issue!

NorthC: Produced by Steve Hawtin, the NorthC disk is one of the newer offerings to hit the Amiga world. In the main it has proven to be quite good, and its library functions are growing with each release. The only real drawback is that it doesn't support the new ANSI style of function declarations but, with a little practice at using and converting between the two C styles, this is less of a problem than might at first be imagined.

PDC: This is the only non-commercial offering I've come across that is usefully near to the ANSI standard in terms of its support for function prototypes, function declarations and structure passing. After some preliminary trials PDC looks to be about the best of the bunch as far as a cheap ANSI style C goes.

Lattice/SAS C £199 – Hisoft
Tel: 0525 718181

Manx's Aztec C – Developer version £200; Professional version £112 – from USA sources only

Sobozon C* – Akore disk UT 4135

Z C* – Akore disk UT 4138

PDC* – Akore disk UT 4139

North C* – Akore disk UT 4145

Akore disks £2.49 per disk (£1.99 10 disks or more). P&P £1.95 (tel: 0800 252221)

A bit of advice...

If you choose one of the public-domain/anything-ware compilers then you'll probably find your first job will be de-archiving the disk. Your second job should be to print out all the document files you can find on the resulting disks.

Also, print out some of the program examples which are invariably included. Chances are that not only is all this printing going to take you ages but, if you are new to programming, you will not understand much of it anyway. That however, doesn't matter – access to the hard copy will make it easier for you to browse through the documentation, and for you to see the example programs as whole units rather than just fragments on the screen. All this will help you come to terms with the C language more easily.

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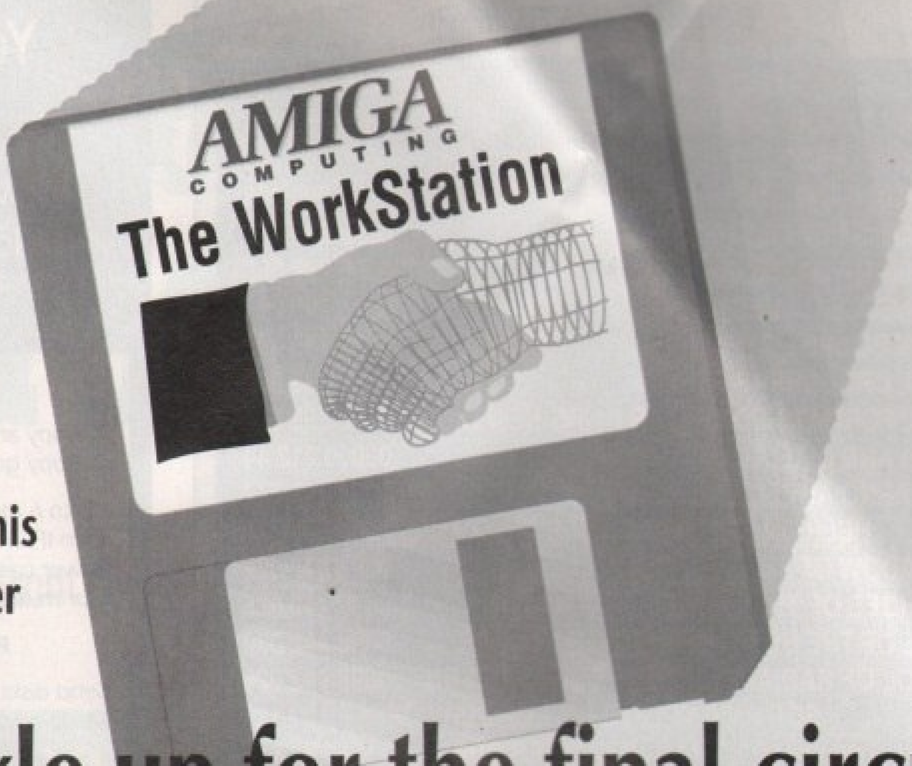
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Buckle up for the final circuit at the controls of good old SID

Paul Austin explains how to get the best from SID's hidden talents in this final chapter



With no more ado we'll dive straight back in where I left off last month. This time we'll round off our look at SID by revealing the mysteries locked within the remaining command panel.

Rename, Delete and Disk

Rename, as you're probably aware, will do exactly that to any file which has been highlighted. It's possible to highlight multiple files and jump from one to the next, simply hitting Return to add the appropriate name as you proceed through the list.

Delete is another fairly self-explanatory command, which will have the desired effect on any highlighted directory or file providing, of course, that the disk and files in question are unprotected.

The third member of our initial trio is Disk which can be a very handy addition to SIDney's repertoire, giving an instant rundown on the status of any device on your system, whether that be a floppy volume, a hard drive or a partition.

Protect, Set and Info

The second trio kicks off with two files that at first glance appear to be identical but which have one very distinct difference.

The first of the two, namely Protect, is designed to work on individual files, assigning a unique combination of flags or bits for each. With the aid of this little addition SID can help you to decide whether a file should be hidden, protected, undeletable, or in fact, any combination of the eight available bits.

Once a combination is complete and the protection set the next or previous file in the selected list can be accessed and adjusted accordingly. When the final file is set and protected, all the flags are assigned and the selected files released.

To check the status of any file simply click on bits after hitting the right mouse button at the bottom of the screen. This will display the bits status of all listed files instantly.

The Set option is almost identical, but once a bit combination is set it's applied to all the highlighted files. This may seem a little brutal but it can be invaluable if you want to universally change a bit, for example, hiding some incriminating art work or ensuring that all files can be deleted if necessary. Info works in a similar way to Disk but applies to files and directories rather than to disks.

Simply highlight the file in question and hit the Info icon to reveal all the necessary information from the format, size, status and so on.

All, None and Pattern

All and None are, in effect, a reflection of each other and are simply used to highlight or de-select entire directory lists ready for copying, deletion, viewing, hearing or, in fact, anything you fancy.

The third of the trilogy is related to its predecessors but is a great deal more subtle as it can be defined to select files by their suffix alone. For example, all files with the suffix *.pic* could be selected from a list of hundreds merely by adding the word *.pic* after the #? – or wild card – in the Pattern requester.

Hit Return and all the files with the suffix *.pic* will be selected regardless of the name in front of the suffix. Once selected, all the options are available.

Pattern matching is very useful for all manner of disk management so keep it in mind when you're working with large numbers of files: it can save hours of arduous clicking.

Bytes, memory and time

Bytes is another method of measuring the size of a file and the number of files and sub-directories within any directory. The command can also be applied to individual files.

After any entry is selected a rundown of the bytes, blocks, number of files and directories appears below the command panel for your perusal.

Memory gives a detailed measurement of available Chip and Fast ram plus a running total of the two. This is another very handy option for single drive users who want to squeeze a few more files into ram before dumping them back to a fresh floppy.

Time. Yes, you've guessed it, this one tells the time and before you reach for a biro to tell me... *"that would be all well and good if you could set the bloody time with the Workstation"*, in fact you can, but it must be done through the CLI – or dare I say it, use Workbench. This seemingly strange state of affairs is due to the cut down preferences used on the Workstation which has all the options of the original – apart from clock adjustment, of course – and still manages to do it using only 18K as opposed to the 56K of the original preferences.

The final three buttons are mostly ignored due to the inclusion of Lharca back on the main Workstation screen. Nevertheless if you want to go straight to Lharca rather than return to the main screen simply highlight a file and click on ARC. Now hit Return and Lharca will auto-load.

Once loaded all the archiving options are ready and waiting so there's no need for the sometimes complex syntax usually associated with archiving.

For those of you who need alternative archiving routines, next month's issue will be a must because we'll look at swapping some of SID's commands to suit you and your system.

Until next month that's about it. Next time we'll also look at customising SID's config file along with how to tinker with the internal workings of a few of his contemporaries.

If you're a newcomer to this column you might be a little puzzled as to what this mystical WorkStation disk is all about. If that's the case it's worth checking out Page 168 for details about what you're missing and how you can get in on the act.

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Hard times

About a year ago I acquired a GVP 40Mb hard drive for my A500, and since then I have had quite a few problems with read/write errors. Initially, the problem was fixed by the local Commodore importer who could not explain to me exactly how he did it – the language is a bit of a problem here.

However, the problem recurred and I am now pretty sure that it is due to inadvertent use – by my inquisitive three-year-old twins! – of the boot off/on switch on the front of the drive. I have used FixDisk and DiskDoctor several times to repair the disk structure, but on re-formatting the drive (always in FFS) the errors gradually reappear until the drive no longer auto-boots. I fear the root block is affected, and I wonder whether this is addressed by the FORMAT command.

In view of my problems I wish to seek your advice on the following:

- What utility software is available to fully prepare a hard drive, partition it, write the boot block, and so on?
- Is FixDisk capable of repairing the problem, and if so, how should that be done?
- FixDisk tells me the device handler is SCSIDEV.DEVICE. Where does it find that? Is it hard wired on rom as part of the drive?

Please help! The drive was purchased from Power Computing in the UK, but it'd mean enormous phone bills to contact them.

Ron Pieterson, Bangkok, Thailand

The game switch is innocent! Before you tape it down or otherwise restrict what is actually a handy feature of the Impact Series II drives, consider the real problem. If you're still getting read/write errors after repeatedly re-formatting your hard drive (ouch!), the problem most likely lies with the drive mechanism.

If the drive has received a knock in transit from the UK, or in a Bangkok warehouse, the drive heads will probably be damaged. The only practical solution would be to replace the hard drive itself with a slimline Quantum ProDrive mechanism. This will fit snugly in the GVP's casing and shouldn't cost too much in your part of the world.

As for the software you mention, FixDisk is about the best shareware hard and floppy disk repairer, and the GVP FaaastPrep software you should have received with your drive is perfectly adequate to prep, partition, and format your hard drive.

Take the drive to your local dealer and have him fit a new Quantum mechanism in the shop. Make sure he does it on the spot because it's not a difficult task and it sounds like he did a poor job the first time you went to him.

PC piccies

I would be obliged if you could help me with a query on the utility IFF2PCXII on the CoverDisk.

I can convert the image to PCX with no problems on an Amiga formatted disk, but when I put the disk into an IBM PS/2 it refuses to be recognised, which I can understand.

Could you please tell me the steps to load a converted IFF file in PCX to the PC?

G D Coxon, Stoke-on-Trent

Judging by the number of letters we get along a similar vein, there are armies of Amiga owners trying to force PCs to accept Amiga files. The process is fairly simple. First, you buy a PD or shareware MSdos transfer program such as MessyDos, or go for one of the commercial ones like Dos-2-Dos. Once you've set this up on your Amiga, it's a simple matter of formatting a PC disk and copying the file on to it.

Transfer programs usually allow you to specify which of your floppy drives is to be treated as a PC drive, but I'd recommend MessyDos as it's shareware and allows the floppy drive to act as an Amiga drive or a PC drive, depending on what format of disk is inserted. It's a bit trickier to install than one of the commercial programs, but MessyDos is worth the effort.

Bother with bugs

I am in desperate need of advice as I have a problem with a virus and can't get rid of it.

I recently purchased an A500 with A501 memory upgrade, and bought separately a Zydec external drive. However, nearly all my disks have read/write errors or Not A Valid Dos Disk in Unit 0 or 1.

My friend suggested I try a virus killer, so I went to my local software store who supplied what they considered the best killer for £10. I loaded it up and bingo, a requester with the message "Unknown (virus) task in memory" popped up.

Having followed the onscreen instructions I terminated it, or so I thought. The virus killer then crashed.

My fault, I thought, and went through the same procedure but was rewarded with another crash. I tried six times to load the killer, and each time after terminating a virus it crashed. The virus killer is not at fault as I have replaced it with a new one and used my friend's version with the same results.

I need help as I am stuck with £400 worth of useless junk until the problem is solved.

S Jones, Hereford

You say the virus killer is not at fault, but if you paid £10 for a commercial killer, it almost certainly is. All the best Amiga virus killers are available for a small fee as shareware or PD programs, and the only commercial killers I can think of are hopelessly out of date.

Check out this month's CoverDisk! You will find a copy of John Veldthuis's excellent freeware Virus Checker.

It is the latest version, which recognises many new file viruses, including the Saddam virus, and comes with a program called FixSaddam.

Use this to check all your disks and kill off the viruses you find, then run it at regular intervals to ensure your collection isn't infected again. As a sensible Amiga owner, you should also keep an eye on the PD/shareware scene for the latest developments on the virus front.

Wrong driver

I use the Pen Pal wordprocessor, and whenever I try printing anything using the Amiga Fonts/Amiga Graphics option, after printing what I have asked, the printer, upon reaching the start of the next sheet of paper, starts printing a load of continuous black lines and the program just freezes then gives me a guru.

This can't be due to lack of memory, because I have an A590 with extra 2Mb, and ProWrite 3.1.1 gives me no problems. I have checked the obvious, such as setting up the correct printer driver, but to no avail.

Please can you help, as I have £80 of software just sitting on the shelf? My printer is a Seikosha SP180ai and the printer driver I use is the MPS_1250. One other question – assuming you can solve the printing problem, how do I import Photon paint pictures into Pen Pal without them looking like they've gone through a shredder?

R C Caylor, Doddinghurst

Your problem almost certainly lies with the printer driver. The CMPS_1250 driver is specifically designed to work with the Commodore printer and will be only incompletely compatible with other printers.

The Seikosha is an Epson-compatible printer, so you should use the standard EpsonX driver supplied with Workbench and on the Pen Pal extras disk. If you still have problems, check your printer's DIP switches to ensure they're set up correctly for graphics printing. It's highly unlikely that the fault lies here, but it's always worth checking them.

The reason your Photon Paint pictures are looking a bit bedraggled is because Pen Pal is designed to cope only with eight colour images. If, therefore, you want an accurate representation of your graphics, you'll have to restrict yourself to the smaller palette. No HAM printing for you I'm afraid!

Imported drives

I am considering buying a GVP series II 52Mb hard drive for my A500, and have seen advertisements in an American magazine where they sell this hard drive for approximately $600. At the current rate of exchange, this works out at £361.

In the UK, the same product is advertised for approximately £500. Many other products are also cheaper in the US. I appreciate the risks involved, especially if the goods are faulty, but if purchased on a credit card, are there any savings to be made?

How do you overcome the power supply differences, and how much would shipping and import duties cost? Are there any other potential pitfalls?

J R Evans, Pontypool

The GVP power supplies which come with Impact Series II drives work both in the US and the UK without the need for an adaptor. The question of postage and import duties is another thing entirely.

Check with the retailer and find out how much more they charge for overseas delivery. You might find they will charge little or no more, but you may find yourself landed with a hefty courier bill. As for import duties, I'm not genned up on such matters and can't really say how much it'd cost. However, we regularly receive packages from the US, some of which require duties of £60 or more to release them from the clutches of the Excise man. Your best bet would be to phone Customs and Excise.

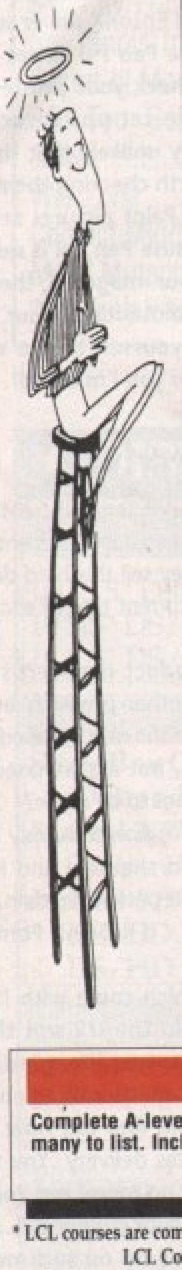
The only other problem I can see arising is if the drive develops a fault or is damaged in transit. The process of having it replaced by the retailler would undoubtedly be much more prolonged than if the drive was bought in the UK.

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All the best

What's hot and what's not. Stewart C Russell should know – he's tried them all

To kick off my spell as *Amiga Computing's* new comms columnist, I thought I'd give you a mini-review of all the comms packages I've used on the Amiga.

All of the systems mentioned below work quite well, so it's down to my personal opinion of each one. Some people will swear by the ones I don't recommend – but choice of comms software is a very personal thing.

I would always recommend that you try the free or shareware packages first, before graduating to the commercial systems. Shareware packages tend to be more up to date than commercial ones, since the former have no distribution delays and can be updated quickly without the need for expensive repackaging.

Access!

Registration: $25 (but see below)

Let's start with a package I wouldn't recommend, despite its very neat presentation and reasonable ANSI graphics support. Unfortunately, the author, Keith Young, seems to have disappeared off the face of the earth, making registration difficult.

Access! is quite old now, and other programs offer more. So saying that, it's not that bad if you already have it, since it does work most of the time.

A-Talk III

Published by Oxxi Inc
Distributed in the UK by HB Marketing Ltd
Tel: 0753 686000

A-Talk tries to be everything to everyone. It can emulate a wide variety of terminals, from the slightly obscure Heath H19 through the more usual VT100/ANSI emulations, to the rather specialised Tektronics 4014 graphics terminal. Strangely, only the Tek and Workbench screen options support PAL screens; the rest are short 200-line NTSC efforts.

As befits a program which will be used with mainframe and BBS connections, A-Talk offers all the common file transfer protocols, including ZModem and Kermit. Facilities for adding more protocols are supplied through External Protocol (XPR) library support.

For such a comprehensive program, it is surprising to find that there is no way of configuring the package to your modem, beyond choosing from a small list of supported hardware. Since most of the modems on the list have been superseded or were never approved for use in the UK, you may encounter problems if you have an obscure setup.

A-Talk offers the most powerful script language of any Amiga comms program. It integrates ARexx with its own commands, allowing data captured online to be processed offline by other programs. Several examples are provided, including a simple BBS and a powerful remote access system.

The program is supplied with a very fine manual, which provides an excellent introduction to communications terminology and practice, along with clear descriptions of the workings of the system.

Unlike other systems, A-Talk is supplied with some of the archiving and file maintenance utilities required for day-to-day BBSing. Unfortunately, the very common Lharc archiver is not included, possibly because A-Talk was around before it made an appearance on the Amiga.

A-Talk is a "nearly" program. It is rather steeply priced, with an RRP of around £90, and there is rather too much to complain about for that sort of money. Still, it is a well presented program which is both reliable and useful.

AZComm

Free
Fish Disk 171

AZComm is very old, and compared to most other programs, very basic. It has no phonebook editing facilities – a text editor is used instead – no support for ANSI graphics, no PAL support and no call time logging either.

It sounds like it's a turkey. How could anyone recommend it over something as pretty as Access!? There are two extremely good reasons.

Firstly, AZComm has a very fast implementation of ZModem. This protocol is generally regarded as the best way of transmitting data across a telephone line, because it automatically adjusts itself to suit varying line noise conditions.

Secondly, AZComm is very small as Amiga comms programs go. It's around 64Kb long, allowing it to fit on a fairly full startup disk without displacing too many useful utilities.

AZComm will certainly be adequate for starting out in comms, since it doesn't have too many confusing options. It was the first piece of comms software I used on the Amiga, and I still rate it highly.

JR-Comm 1.02a

Registration: US$35
Most bulletin boards

JR-Comm is a program shaped by the requests of hundreds of BBS users worldwide. Jack Radigan, the author, has a very definite vision of how the program will evolve, and has been known to flatly refuse to implement ideas which don't fit in with his philosophy.

The program is designed to be the best for serious BBSing with fast modems. Although it will emulate a VT100 terminal, it's most at home with its full ANSI terminal emulation, right down to mimicking the keyboard of an IBM PC.

JR-Comm supports the Amiga-specific SkyPix terminal standard. This allows windows, menus, bitmap graphic animations and sampled sounds to be used in an online system. It's not quite multimedia, but it's fun if you find one of the very few boards which support it.

The ZModem adaptive file transfer protocol is supported better than any Amiga program. These options are set via a large array of gadgets, which has a tendency to bewilder the new user. Personally, it gives me the raving technofear habdabs every time.

At least the documentation isn't too frightening. The documentation actually amounts to more



Although JR-Comm offers superb terminal options, it has a tendency to present rather more options at once than the mind can handle

bytes than the program itself, but it's well written and contains hints and examples for specific modems. There is no aspect of the program which isn't covered in minute detail, so you won't get lost in JR-Comm if you keep this wonderful manual with you at all times.

Unregistered versions of JR-Comm have delay screens built in, plus plaintive messages are posted after 30 days' use. For such a powerful program, JR-Comm is very reasonably priced at US$35. That's around £21 in Real Money, or less than the price of one possibly mediocre game.

JR-Comm doesn't support scripts yet, but a version with this plus ARexx support is in the works. As it stands, it's an uncompromising sports model of a terminal program – some people won't be able to handle it.

NComm 1.92

Registration: Giftware
Most bulletin boards

NComm is the sole European effort in this whole overview. It was originally written to allow the Amiga to support the IBM-Norwegian character set, but over time it has matured into what has to be my favourite terminal program.

The outstanding feature of NComm is its internal multitasking – you can be browsing through the scrollback buffer while the terminal is still receiving and displaying information from the remote system. You might think that this is of limited use, but once you've tried it, you really can't live without it.

Registration is easy and novel – just send the authors a gift. The nature of the gift is entirely up to you, but it should reflect the value of the program to you. Hmm, how am I going to post a gold brick to Norway...?

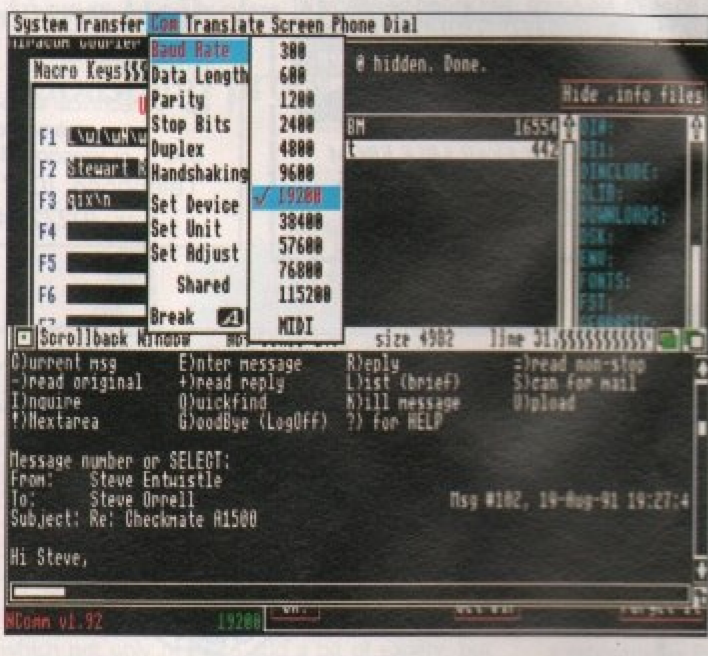
The usual protocols are supported, plus any extra you may wish to add via XPR library support. There are known problems with certain versions of the XPR ZModem library, and NComm is supplied with an old, but serviceable, version.

There are also problems with high speed support for YModem-G, the fast minimal protocol for use with error-correcting modems. Despite these problems, I can still get momentary bursts of over 1900 characters per second with ZModem on an A500 and a Courier HST, so it's not slow.

NComm does have quite a powerful script language, but because it doesn't support ARexx, it cannot readily control external programs. It is quite powerful enough to write a small BBS system, and one is supplied in script form with the distribution archive.

The latest version of NComm (v1.92) isn't available outside the BBS circuit. However, the very serviceable NComm 1.9 is on Fish Disk 356. The later version adds better file requesters and fuller support for XPR protocols (including Kermit) plus the ability to change the program's task priority for enhanced performance.

I use NComm 1.92 daily, and I keep hearing tales of woe about how it doesn't work on other people's systems. For once, my ageing and sometimes incorrigible A500 works perfectly with a piece of "difficult" software. It gets my vote as the best Amiga comms program around.



NComm multitasking its macro key editor, file requester and scroll back viewer. Somewhere under all this the terminal is running too

VLT

Free
Fish Disks 468 & 455 – both required

VLT is a special purpose comms program. It could be used for connecting to bulletin boards, but it is really designed for mainframe connections.

It emulates a DEC VT100 terminal to a very high standard, with character graphics and 132 column operation. It also pretends to be a Tektronics 4014 graphics terminal, a standard used in mainframe CAD applications, right down to coordinate input using the mouse.

VLT supports XModem and Kermit file transfer protocols, plus any XPR external protocol library – so ZModem can be used if desired. Since the system is tailored for graphics applications, it can save the screen as an IFF bitmap or as PostScript structured graphics. ARexx is fully supported, allowing the program to be customised to the user's preference.

In short, if you need to connect to a large remote computer system, VLT is the program to do it. It has more features applicable to this sort of usage at a lower cost than any of the other systems.

Online! Platinum

Published by Micro-Systems Software Inc
Distributed in the UK by HB Marketing Ltd
Tel: 0753 686000

This program can be bought separately, or as part of The Works! Platinum Edition software bundle. If you really shop around, The Works! can be bought for under £80, which offers good value for money. Online! costs around £40 if bought separately, which is still very reasonable.

Online! isn't sure whether it's a BBS users package or a technical users system. It offers all the necessary protocols for good BBSing – including the extremely obscure SADIE protocol, used only in MSS products – plus it tries its hand at VT100 and Tek 4010 emulation.

It offers a very powerful scripting language, with full ARexx support. It isn't quite as powerful as A-Talk's scripting language, but it would certainly be able to run a small BBS host, or feed captured data to external applications.

If I have to pick holes in Online! Platinum, I found a very tiny irregularity in the elaborate installation sequence. It missed out a vital colon in an Assign command, causing it to fail. As it appended it to one of your startup files, it would have prevented the system working in a very subtle and nasty manner. Once discovered, the problem is embarrassingly simple to fix – just add the missing colon.

Online! also manages to look old, somehow – it has all the old-style requesters, with none of the pseudo-3D WB2.0 look. Despite the aesthetics, it works well, but as a stand-alone package, NComm and JR-Comm offer more for less money. If you also want the other packages in The Works!, it offers usable features at a very low cost.

Conclusion

So there we have it – a brief look at most of the Amiga comms programs. I know I've missed out a few, but those omitted are the ones I have never used.

So which one is the winner? For general BBS work, it's a straight fight between JR-Comm and NComm. They're pretty much level on features, and they are both top-line pieces of software.

Since NComm and JR-Comm are shareware, you can make up your own mind about which is best. I prefer NComm; it happens to work the way I like working.

Stewart C. Russell can be contacted on CIX as "scruss" or via Fidonet as Stewart Russell at 2:259/2 (Scottish Opus).

DTP for DTV

Jason Holborn shows how PageStream, the desktop publishing program, can be used for video work

After last month's look at how you can use DPaint within your video productions, I thought I'd continue on the theme with a look at a few more packages that could make your video productions look a lot more professional.

Rather than waffle on endlessly about the more obvious programs – presentation systems and video titlers, for example – I thought I'd restrict the coverage, for the meantime, to some of the more unusual programs.

Believe it or not, many of the packages that you may use for such things as DTP and solid modelling work can be used for genuinely useful video work. You may not think that DTP is something that translates to video particularly well, but you'd be surprised. All that is needed is a little bit of imagination and an understanding of the technology available to you.

One package that I use a great deal is Soft Logic's excellent PageStream 2.1. Why? Well, now that PageStream supports Compugraphic fonts, it's ideal for producing titles.

OK, several video titler manufacturers are now starting to use Compugraphic fonts too, but PageStream offers distinct advantages. For starters, PageStream's ability to scale fonts simply by dragging them in or out to the required size is a real boon. If you've ever tried producing video titles using conventional bitmap fonts, you'll soon start to appreciate just how useful this feature is.

Unlike bitmapped fonts, Compugraphic fonts are scalable, so you can stretch and compress them to just about any size without any degradation in quality. Even at very small point sizes, Compugraphic fonts still look a lot better than their bitmapped cousins.

Obviously the resolution that you are working in will degrade the title a little, but Compugraphic fonts still manage to look good, even in low res.

Another very nice feature of PageStream is its box rotation feature. ProPage now has this too, but PageStream's box rotation is far more powerful. It's not just restricted to straight box rotation – like ProPage – instead, you can slant and twist fonts, which not only helps to add a bit of variety, but can also make your titles look more professional.

Right, so we've discussed how to manipulate all those lovely Compugraphic fonts, all that now remains is to turn them into something that can be used within a video titling, paint or presentation system. For this, I use a very powerful little screen grabbing utility called PicSaver.

It's a PD program, so there's no excuse whatsoever for not buying yourself a copy of it today. Pic Saver is on TBAG disk 56 which is available from AmigaNuts United on 0703 785680.

PicSaver isn't just a screen grabber though. What makes it so special is its ability to grab any rectangular section of any screen. Simply by holding down three hot keys, you can drag out a box around a particular section of the screen. When you release the mouse button, PicSaver saves the graphic block to disk as an IFF file. If you are using a program like PageStream, don't forget to turn off the page grid. If you don't, you'll have lots of little dots which must be painted out before the graphic can be used.



Jaggie-free compugraphic fonts can make superb video titles

Great effects

Once you have your title on disk as an IFF file, all that remains is to tart it up a bit in a paint package like DPaint. The demo image shown elsewhere on this page was created using nothing more than PageStream and a copy of DPaint 3.

I'm sure you'll agree that it looks a lot nicer than the kind of effects that are obtainable using conventional bitmapped fonts. It's also worth noting that I've put a 2 pixel black border around the graphic. As discussed last month, this helps to minimalise colour bleeding when the image is laid down on to video tape.

PageStream isn't the only package that can be used for video work. Another very fine DTP program that I use extensively is Gold Disk's Professional Draw 2.0.

ProDraw handles all its graphics in structured form, therefore they can be twisted and stretched without any loss of image quality. Fonts are particularly well handled in ProDraw, although I must admit that the results don't always look as good as they do within PageStream.

Those of you with unexpanded Amigas may find the going a bit tough when you start playing around with large sections of graphic like those used within the screen shown. If you can afford it, it really is worth it to buy a ram expansion of at least 2Mb.

Even better, get your machine converted – in the case of the A500 – to work with the new ECS Agnus. This new chip, which is now installed inside all new Amigas, allows you to use up to a megabyte of chip ram, which can be very useful indeed for this kind of work.

Anyway, that's enough for now. I'll leave it to you to find even more ways of using packages like PageStream. If you do come up with a particularly good idea, why not write in and let me know?

Amiga Toasters for Macs

Amiga owners can no longer look on smugly at other professional computer users with the news that Kansas-based NewTek have developed a Video Toaster system for the Macintosh.

The Mac Video Toaster comprises of a black box which connects to the Mac via a smart serial interface. Contained within is all the usual Video Toaster hardware, plus an extra bit of circuitry that Mac owners may be rather reluctant to admit to – that is, it contains an Amiga.

Instead of developing a brand new Video Toaster for the Mac – which is something that probably wouldn't even be possible without considerably more circuitry – NewTek have decided instead to develop a stand-alone Video Toaster that contains much of the Amiga's custom hardware.

The fairly hefty box is basically an Amiga B2000 without a keyboard, although the software side of the Video Toaster is controlled almost entirely by the Macintosh. In reality though, the Mac is treated as nothing more than a dumb terminal, with all the hard work handled by the Amiga itself, so we Amiga owners can still retain a certain amount of smugness.

Also on the Video Toaster front, NewTek have released version 2 of the Video Toaster. Little was known about this new release at the time of going to press, although sources close to the company revealed that the new Video Toaster offers double the resolution of the original Toaster plus much improved software. The new software offers many more video effects, plus a lot more besides.

There's still no news of the PAL Video Toaster which is definitely going ahead. NewTek are talking in terms of about a year, although I wouldn't be surprised if it took considerably longer.

The current Video Toaster is tied very closely to the peculiarities of the NTSC video system, working around loop holes to produce its effects. Producing a PAL version would also certainly require a total rethink, so don't hold your breath for this one.

Rest assured though, I'll be bringing you a full review as soon as a PAL Video Toaster appears.

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How to score

Keeping scores and other info in a fast-moving game requires some fast code. Margaret Stanger has the answers

This month's Machine Code is all about the display on a scoreboard and there is a fully working program on the CoverDisk that demonstrates these techniques.

There are several ways to put the empty scoreboard on the screen. If the scoreboard is fairly simple, it could be generated by drawing into the rastport. This takes up no extra space on the disc or in the program.

The disadvantage is that drawing lines and colouring in rectangles can be rather time consuming, even for an Amiga.

The scoreboard could be generated by an art program like DeluxePaint, stored on disk, and read in whenever the scoreboard is to be cleared. The design can be more elaborate, perhaps even a posh scoreboard designed by an artist.

If the program has enough free memory, the scoreboard picture can be read into a bitmap in memory, stored there during the program run, and copied to the screen when needed. Usually I prefer this method but there is no hard and fast rule.

Status symbols

To add variety, sometimes a gameplayer's status can be displayed in picture form. Usually the small number of lives left is shown pictorially.

Time used and damage sustained are often displayed as an increasing line. Available weapons, energy, health and stamina can be a line that decreases depressingly quickly. These lines can be updated with a dot in the foreground or backgound colour very quickly.

The demonstration program shows decreasing energy and increasing time. To keep track of the passage of time, a green rectangle is slowly built up until it fills the rectangle. This is done by drawing an extra line every few game cycles.

The decrease in energy is done by adding black lines, and making the energy rectangle smaller.

The writing on the wall

For text and numbers that vary during the game, the graphics library text routines can be used. I find this process rather too slow for a fast moving game that needs its scores updating quite often. Instead I keep a copy of my system or designer font in picture form in memory.

The demonstration program reads in a DPaintII 320 x 256 4 Bitplane picture called fontpic. This contains both the blank scoreboard and the font.

I use the BltBitMap command to copy the text from memory to the screen. The letters are not copied very often, so I have used a routine that puts a mask of the letter on the background first, then the letter in the chosen colour. This could easily be adapted for multicoloured letters. The routine to display the numbers is slightly different. As the numbers are updated fairly often, I keep a copy of the number and its backgound, so that it can be copied to the screen in one operation.

To make life easier, I have written a small routine to display a chosen text string, or string of numbers:

```
_writedigit:
   move.b  (a5)+,d0 ;ASCII value
   andi.l #255,d0   ;end of string?
   beq     writeout
  move.l  d0,asc   ;input ASCII
   jsr     digit     ;display digit
   move.l xoffset,d0 ;next position
   add.l  d0,_xpos  ;next digit
   bra     _writedigit
   rts
```

Keeping score

The game score is kept in memory in a hexadecimal form in a byte, word or long word. This form is terrific for arithmetic, but not so good for display. An Ascii string of numbers is perfect for display, but useless for sums.

Whenever the scoreboard is updated the score has to be converted to its display form. The routine that does this conversion also has to make sure that the score does not overflow the scoreboard:

```
bindec: ;for 4 digits only
movem.l d0-d1/a0,-(sp)
adda.l  #4,a0 ;last position
move.w  #3,d1 ;count
bdloop:
ext.l   d0 ;extend to long
and.l   #$ffff,d0
divu    #10,d0 ;divide by 10
swap    d0
move.b  d0,-(a0) ;remainder in string
add.b   #48,(a0) ;add 48 for ASCII
swap    d0        ;answer
dbra    d1,bdloop ;round loop again
movem.l (sp)+,d0-d1/a0
rts
```

The key to it all

The keycode of the key pressed can be calculated from the value of the CIA sdr register. First the byte is copied from this register into one of the data registers, then it has to be unscrambled. If a key with code 6 is pressed down, the value from the register is:

```
11110011
```

This value is EOR'd with 255 (11111111) to give:-

```
00001100
```

This gives the keycode in positions 1 to 7, and the key up/down flag in postion zero. Rotate the byte one place to the right, and put the key up/down-flag in position 7. This will give the RAWKEY CODE:

```
00000110
```

If a key with code 6 is released, the value from the register is:

```
11110010
```

this value is EOR'd with 255 (11111111) to give:-

```
00001101
```

This gives the keycode in positions 1 to 7, and the key up/down flag in postion zero. Rotate the byte one place to the right, and put the key up/down-flag in position 7. This will give the RAWKEY CODE:

```
10000110
```

The routine _key does this calculation, and clears the register. If the register is not cleared, it will not change its value until the next key is pressed:

```
_key:
  clr.l  d0
  clr.l  d2
  move.l #$BFED01,a0   ;CIA register
  move.b ciasdr(a0),d0 ;read register
  move.b d2,ciasdr(a0) ;clear register
  eori.b  #$ff,d0   ;invert
  move.b  d0,d1
  ror.b  #1,d0          ;rotate
  and.b  #1,d1          ;find bit zero
  tst.b  d1
  beq    keydown        ;keydown or keyup
  ori.b  #128,d0        ;keyup
keydown:
  ext.w  d0
  move.w d0,numberpressed
  rts
```

The routine _addscore looks at the RAWKEY CODE and discards key releases. If the code is for letter Q, the energy is put to minimum so that the program will exit. Numbers 1 to 9 conveniently have RAWKEY CODES from 1 to 9. These are displayed and added to the score. Number zero, with its RAWKEY CODE of 10, has to be intercepted first.

How the program works

The display is initialised, and the blank scoreboard and font are read in from the disk. The text is put in place, and the initial energy displayed. Each game cycle is counted. When the number of game cycles reaches the chosen rate then energy is decreased and time increased.

When a key is pressed down, the keycode is stored. If the key is a number between zero and nine, it is displayed as a number and added to the score. Key releases and most letters are ignored.

The program exits when the energy runs out, or Q is pressed. The numbers will have been echoed to the calling CLI window. Press Return, or delete these numbers to continue.

COMING SOON. . . Next month I hope to demonstrate a little hardware programming.

A great performance

Does the release of SunRize's Audition 4 mean the end for AudioMaster? Jason Holborn finds out

For years now, Aegis/Oxxi's AudioMaster sample editor has ruled the sampling waves. With its ultra-friendly user interface and powerful editing options, AudioMaster has remained the sampling fanatic's favourite.

Despite the fact that Aegis have only recently started bundling the program with a sampler, virtually all serious sampler users choose AudioMaster over the sample editors bundled with their sampling hardware.

I recently received a review sample of SunRize Industries' Audition 4. Billed as the program that "carries on where AudioMaster 3 left off", SunRize are certainly making brave claims. Does it live up to them?

Sound choice

SunRize have optimized Audition 4 to work with their own Perfect Sound 3 sampler, although it also supports a number of other samplers including Perfect Sound 1 and 2, SoundMaster and a general purpose Generic option. If you own a sampler that isn't directly supported, then it's worth trying both the SoundMaster and Generic settings to see which works best with your kit.

One surprising omission is the lack of support for high speed samplers like RamScan's excellent Audio Engineer. These will work perfectly well with the SoundMaster setting, but they won't be used to their full capacity.

Once you've told Audition 4 which sampler you are using, you're ready to get down to some serious sampling.

Play away

Upon loading, you'll notice that the Audition 4 screen is split into two distinct areas. At the top of the screen is the usual display which plots your sample in graphical format. Below this is a selection of gadgets which allow you to carry out all the basic functions including Play Waveform, which plays the entire sample held in memory; Play Display, which only plays the area of sample currently being displayed; and Play Range, which plays a marked range. There are also gadgets which allows you to zoom in and out of the sample and turn looping on and off.

Audition 4's Zoom function is particularly impressive. Most sample editors – including AudioMaster 3 – require you to mark out a range which the software instantly jumps to when you click Zoom.

However, the zoom function is considerably more sophisticated than this. Instead of jumping straight to the marked range, Audition 4 zooms in on it, increasing the amount of magnification until the desired range is fully displayed. It's a little like using a zoom lens on a camera. All the rest of the Audition 4 functions must be selected from the pull-down menus, with extra gadgets appearing at the bottom of the screen whenever a function is selected. The first function that you will want to play with is the sampler section, so we'll take a look at that first.

Sample city

Audition 4 fully supports both mono and stereo sampling when used with a compatible sampler. Those like Sound Trap 3 or MasterSound won't allow for stereo sampling, so you'll need something like TechnoSound, AMAS or SoundMaster to grab stereo sound.

The sampler section is split into a number of gadgets which allow you to alter the sample rate, monitor the incoming sound source and finally grab a sample.

Surprisingly, you can't dynamically control the size of the sample. Instead, Audition 4 tries to allocate as much contiguous memory as possible. When you set the sample rate, it then tells you how long the sample will be in seconds. A 512k Amiga will grab five seconds worth when sampling at the maximum rate.

Depending on which sampler you are using, you can grab at up to 55 KHz. However, these really aren't a great deal of use, as the vast majority of sample-compatible music packages can't handle samples at this kind of rate.

The Amiga's own DMA sample playback hardware only supports rates of up to 29 KHz, so it's best to restrict sampling to these rates.

One very nice feature is Audition 4's ability to record samples direct to floppy disk, allowing you to produce your own sample demo disks. For this, Audition 4 uses its own high speed custom disk format and then tacks a player program on to the boot block of the disk.

As a result, the only way of playing back the sample once recorded to disk is to boot from the floppy that it is stored on. This is perhaps a little too limited for serious use.

I'm surprised that SunRize didn't build in a facility to allow direct recording to hard disk, so I guess we're going to have to wait for SunRize's new Studio 16 software which is bundled with their new 12 and 16-bit sampling cards.

All the usual editing functions are there, and are accessed by first selecting an area of sample using the mouse and then clicking on the appropriate option from the pull-down menus. You can cut areas of sample, copy and then paste areas of sample, zero marked ranges, insert sections and a lot more besides.

Even more interesting are Audition 4's special editing functions which include: Mix, which mixes two samples together; Echo, which adds echo to a marked range; Fade, which fades out a marked range; Flange, which adds a sort of "worbly" effect to a sample; Filter, which filters out specified frequencies; Smooth, which takes out higher frequencies; Maximise, which boosts certain frequencies; and Lift Treble and Bass, which lift the treble and bass of the sample respectively.

Many of these operations is that they can be previewed before you commit yourself. This way, you can control the effect of the operations dynamically, allowing you to get your sample sounding just right.

Conclusion

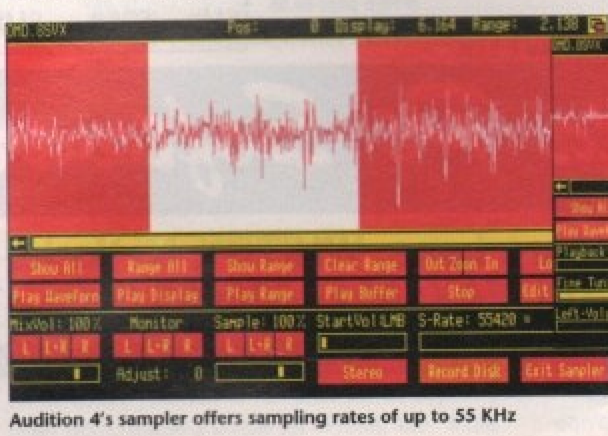
Because Audition 4 is such a complex program it would be almost impossible to cover every aspect of the program within this single page. Suffice it to say that virtually everything that can be done within AudioMaster 3 can also be done within Audition 4. This includes sequenced loops, waveform tuning and much more besides.

It is without doubt one of the most comprehensive sample editors available for the Amiga. I'm not quite sure whether I'd stop using AudioMaster 3 altogether in favour of Audition 4, but I'd most certainly have Audition 4 at hand whenever I wanted to apply certain effects to a sample.

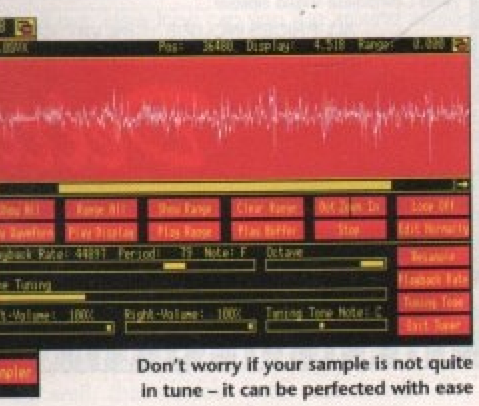
There's no escaping the fact that Audition 4 is a very capable system indeed. For the price, it represents extremely good value for money. So if you are after a sample editor, check out Audition 4 first. You won't be disappointed.

Suppliers

Both AudioMaster 3 (£80) and Audition 4 (£50) are available from HB Marketing on 0753 686000.



Audition 4's sampler offers sampling rates of up to 55 KHz



Don't worry if your sample is not quite in tune – it can be perfected with ease

All together now!

Peter Hickman shows you how to fit the bits into something playable

Entertainment software is big business now, and people have to be a little bit more creative to produce a good game, something which can be distinctly different to a good seller! Hopefully Amos will help you to spend a lot more of your time exercising these creative energies.

One important thing to remember about games software is that a lot of programmers cheat. We have covered different methods of "cheating" in previous issues. Some of the most amazing effects seen in games are, in fact, merely illusion – screen swapping, colour cycling and palette switching are just some of the ways to get amazing results without compromising the speed of your program.

Almost anybody can use these methods, but the real skill is in integrating them with the software so that they are invisible to the player, while at the same time making him or her think "wow, I wonder how they did that?".

OK, the first step in any piece of software is to set up your screen. we've done all of this before – if you missed it then buy the back issues – so I won't take you through all of the old details again:

```
' Set up
Screen Open 0,320,200,16,Lowres
Curs Off
Flash Off
Cls 0
Get Sprite Palette
Double Buffer
Autoback 0
```

Now we have the task of initialising all of the variables that we will use. Although Amos - and most other versions of Basic for that matter - does not require you to do this, it is a habit you should get into. After all, you won't be using Amos forever, will you?

We will need to keep track of the X and Y position of our character, so we will use two variables called X_GOOD and Y_GOOD. As well as storing the position of our character the joystick status will have to be stored, so we will call that variable WAY:

```
X_GOOD=150
Y_GOOD=100
WAY=0
```

Of course we will also need to move the bad guy around, so we will call its X and Y coordinates X_BAD and Y_BAD:

```
X_BAD=0
Y_BAD=0
```

Finally we may want to introduce individual speeds for each of the characters in the game, so we will call these – guess what? – GOOD_SPEED and BAD_SPEED. Notice that by using meaningful variable names we can tell a glance what a particular section of code is doing, but be careful of falling into the trap of ending up with variable names 40 characters long – they can be a real drag to type in!

```
GOOD_SPEED=1
BAD_SPEED=1
```

Ohhhh, I almost forgot. This game is very simple and because of this it is going to be blindingly fast, so in order to slow it down we will only update everything occasionally. It sounds strange I know, but all will become clear very soon.

The variable we are going to use to control this is called T – or time! – and the variable used to hold the score is called SCORE:

```
T=1
SCORE=0
```

Now we have to stick the player and the bad guy on to the screen. For this example program we are using BOBs, but you could use hardware SPRITEs:

```
Bob 1,X_GOOD,Y_GOOD,1
Bob 2,X_BAD,Y_BAD,2
```

Now for the main part of the game:

```
Repeat
```

The first line here tells the program that we only want to execute everything inside the IF structure when the variable T has a value of two. At the moment it only have a value of one:

```
If T=2
```

Our next task is to check the joystick to see if a movement has been made. We will use the JOY() function rather than the JUP/JDOWN functions, because it is more versatile. A fuller explanation as to why this is will be given in the next issue.

We store the current joystick value – which is a number between 0 and 16 – in the variable WAY. If WAY has a value greater than zero then we know that the joystick is being moved, and we can then test the direction and move our character:

```
WAY=Joy(1)
If WAY>0
```

At this point we know that our man has moved so we can increase the score by one:

```
Inc SCORE
```

Now comes the joystick testing bit. In a previous issue we saw how the JOY() function returns values depending on how it is currently positioned. Just to recap, these are the values for the four basic directions: UP=1, DOWN=2, LEFT=4, RIGHT=8.

Knowing this we can see if the player wants to move the character and so can increase/decrease the X_GOOD/Y_GOOD variables accordingly:

```
If WAY=8
   Add X_GOOD,GOOD_SPEED,0 To 319
End If
If WAY=4
   Add X_GOOD,-GOOD_SPEED,0 To 319
End If
If WAY=1
   Add Y_GOOD,-GOOD_SPEED,0 To 199
End If
If WAY=2
    Add Y_GOOD,GOOD_SPEED,0 To 199
End If
```

Another trick when writing a game is not to update anything on the screen unless it has moved. For this reason we will only redraw our little character when the joystick has been moved:

```
   Bob 1,X_GOOD,Y_GOOD,1
End If
```

Here is a tricky question, with a very simple answer. How do you make a nasty home-in on your good guy? Well, imagine you were playing a game where you had to run after somebody. The brain would follow a simple set of rules, like: "If the person is to the left of me, I must move left," and, "if the person is in front of me I must move forward."

These are the simple rules we can follow to make a "homer". Of course most games have a slightly longer list of rules to control movement of bad guys and good guys, but at the end of the day they are still only a list of rules that the program must follow.

I am sure you have played many games where after a while you realise that if you perform a certain action at a certain point, you can make the program do the same thing almost every time. This is because it is just following a set of simple – or complicated – rules:

```
If X_GOOD<X_BAD
   Add X_BAD,-BAD_SPEED
Else
   Add X_BAD,BAD_SPEED
End If
If Y_GOOD<Y_BAD
   Add Y_BAD,-BAD_SPEED
Else
   Add Y_BAD,BAD_SPEED
End If
```

At this point we update the position of the bad guy and increase the value of the variable T. Remember that the ADD statement below has been written so that the number will wrap around from 1 to 2:

```
Bob 2,X_BAD,Y_BAD,2
Add T,1,1 To 2
```

As we have seen earlier, to slow the game down we only update characters every second time we go through the loop. If the value of T is not 2 the program will just execute the next couple of lines and go back to the beginning:

```
Else
   Add T,1,1 To 2
End If
```

Finally, we must set a stop condition on the REPEAT/UNTIL loop. In this case the program will stop if BOB number one collides with any other BOB. If a collision is detected your score is printed and the game ends!

```
Until Bob Col(1)
Boom
Print "YOU ARE DEAD!!!! YOUR SCORE IS";SCORE
Update
End
```

The game is on the coverdisk for those who want to try it out. How long can you run around avoiding the nasty invader type beastie?. Why not experiment a little bit and see if you can add more bad guys and perhaps objects to collect. Before long you could be writing the follow up to Llamatron!

Finally, do not try to compile the game unless you slow it down, because it will end up impossibly fast!

Remember that no piece of software is fixed, and if you do not like something about a game you write then change it!

Oh well, that's about it for this month. But don't worry, I'll be back!

Short cuts

Margaret Stanger reveals some time saving gadgets

This month's Code Clinic is all about using requesters and gadgets in a program to communicate with the outside world. When I am writing programs in any language, I try to build up a library of software routines so that I do not need to reinvent the wheel for every new project.

The software on the support disk demonstrates requesters and several different gadgets from my collection, with a runnable program and fully documented source code.

Automatic

Intuition provides AutoRequest. This function will display a two gadget requester with text of your own choosing.

This command works well, but I prefer to have more control over the requester design than the AutoRequest command gives me. The mouse pointer can disappear if it wanders out of this automatic requester area.

Gadgetry

I decided to make my own generic requester, and give it its own window and choice of gadgets. In the demo program the window and gadgets are plain but graphics could easily be copied into the bitmap or drawn into the rastport.

All that the window needed was a pointer to its first IntuiText structure for its little warning, or chunk of information, and a code to indicate where to find its first Gadget. The IntuiText structure contains all the information for a piece of text, including a pointer to the next text.

```
struct IntuiText ITextA1 =
{
        3,2,JAM2,    /*pens and rawmode*/
        0,7,             /* XY origin*/
        0,                   /*font pointer*/
        "OK",            /&pointer to text*/
        NULL         /*next IntuiText structure*/
}
```

The first gadget for a window includes all the gadget's information including a pointer to the next in the linked list of gadgets.

```
struct Gadget AGadget1 =
{
    NULL,    /*next gadget*/
   127,69,   /*origin*/
   33,16,   /*width and height*/
   NULL,    /*flags*/
   RELVERIFY, /*activation flags*/
   BOOLGADGET, /*gadget type flags*/
   (APTR)&ABorder1, /*border pointer*/
   NULL,        /*alternate imagry*/
   &ITextA1,    /*first intuitext structure*/
   NULL,      /*gadget mutual exclude*/
   NULL,      /*special info structure*/
   NULL,    /*user definable data*/
   NULL     /*pointer to user data*/
 }
```

I include the code for setting up the requester NewWindow structure. The gadget list is dependent on the code, as is the height of the window.

```
Request(code,itext) long code; struct IntuiText
*itext;
{
 if (code==1) NewWinStruct.FirstGadget=&AGadget1;
 if (code==2) NewWinStruct.FirstGadget=&BGadget2;
 if (code==3) NewWinStruct.FirstGadget=&CGadget4;
 if (code==4) NewWinStruct.FirstGadget=&DGadget6;
 if (code==5) NewWinStruct.FirstGadget=&EGadget7;
 NewWinStruct.Height=120;
 if (code<3) NewWinStruc.Height=100;
 if (InitR()==1) return(TRUE);
  /*opens the window*/
 PrintIText(rpreq,itext,0,0);
 Handle_IDCMPReq();
 CleanUpR(NULL);
 return(reqanswer);
}
```

The window has its own message handling loop, just like the main window. Each of the gadgets has its own code that is executed when the gadget in the requester is selected.

```
void HandleEventR(object) APTR object;
{
int i; if (object==(APTR)&AGadget1)
{
flag = TRUE;return;
}
 if (object==(APTR)&BGadget2)
{
flag = TRUE;return;
}
 if (object==(APTR)&BGadget3)
{
return;
}
if (object==(APTR) &CGadget4)
{
flag = TRUE;return;
}
if (object==(APTR) &CGadget5)
{
      i = strcmp(DGadget6SIBuff,DGadget6SIUndo);
      if (i!=0)
strcpy(DGadget6SIBuff,DGadget6SIUndo);
      flag = TRUE;
      return;
}
   if (object==(APTR) &EGadget7)
      (horigadget(&EGadget7);
       return;
}

if (object==(APTR) &EGadget8)
      (vertgadget(&EGadget8);
       return;
}

if (object==(APTR) &DGadget6) (return;
}


}
```

Warnings, strings & props

The first requester, code 1, has one gadget with text "OK". When this is pressed, the window will close. A second type of requester, code 2, has text and a "yes" or "no" selection; the window only closes if "no" is chosen.

The third requester, code 3, is more dignified, with a choice between Cancel and Continue. These kinds of requesters are used for information, warnings, and when confirmation is required from the user.

The fourth requester uses a string gadget to input some text. This gadget is linked to the Cancel and Continue gadgets, so these appear as well. This is invoked by the gadget named String Gadget on the main window. If Cancel is pressed when the requester closes, the old contents of the string are put back into the buffer. This would be a useful gadget for putting a name, or other small piece of text into a program. Gadgets like this are used a lot in file requesters.

The final requester demonstrates a Horizontal and a Vertical Proportional gadget, and is linked to the third gadget list, and invoked by the gadget called "propgadget" in the main window. The position of the slider in a Proportional gadget can be read and used in the main program.

```
horigadget(gadget) struct Gadget *gadget;
{
    struct PropInfo *spi;
    USHORT divisor,lsp;
    divisor = MAXPOT/100;
    spi = (struct PropInfo *)gadget->SpecialInfo;
    lsp = spi->HorizPot;
    horizvalue = lsp/divisor;
    horiztext();
    return(0);
}
```

The maximum value is divided by 100 to give a divisor. When this divisor is used on the HorizPot value, a number between 0 and 100 is given. This number is displayed in the main window but it could be returned from the function and used elsewhere.

Vertical Proportional gadgets work in a similar way. Gadgets with sliders like these feature in colour requesters.

The demo program

The program opens a window with four gadgets; Request, String, Proportional and Quit. Click on Request to display a simple informational requester, and press its OK gadget to close the requester window and return to the main window.

Click on the main window gadget called String to display a string gadget and two simple gadgets named Cancel and Continue. Move the mouse to the String gadget, and click where you want to start entering text.

Enter the text, edit by moving the mouse and clicking, delete if necessary. If you click on the Continue gadget, the new text will replace the old and be displayed on the main screen. Click on Cancel, and the old text, if any, will be shown.

The main window gadget called Proportional will invoke a requester with two proportional gadgets, one vertical and one horizontal. Move the slider on one of these gadgets, and when released a value between 1 and 100 will be displayed on the main screen. Either Cancel or Continue will close the requester for you.

Click on the Quit gadget on the main screen when you get bored with all this.

COMING SOON – Next month I hope to demonstrate a dynamic menu that will display any fonts available and their sizes.

Colourful talk

Barnaby Page discovers that colour is all a question of taste

It might have just been the smoke and the dim lights, but I prefer to think it was a question of colourspaces when Nicola accused me in the pub last night of wearing white socks. I wasn't, of course – even I have my standards, and they were canary yellow – but there's always room for disagreement when it comes to colour.

We all know that people see colours differently. There's not much we can do about this, but as certain colours are universally regarded as disgusting and others as lovely-lovely, we can assume that there's some consensus.

Trouble arises when we try to define a colour precisely, in terms more mathematical than the Autumnal Beige and Sunset Orange beloved of paint manufacturers. And, of course, defining colours precisely is just what we have to do when we put them on a DTP page.

There are two common methods of colour definition, sometimes called colourspaces, sometimes called colour systems. In fact, a true colourspace such as XYZ is a rather more abstruse thing, of concern at the moment only to the optical physicists, but why make an issue impenetrable when it's already complicated?

Two choices

These two methods are CMY (Cyan, Magenta, Yellow), and the more familiar RGB (Red, Green, Blue) – familiar because it's the colour system used in TVs and all computer monitors.

The RGB system is called "additive colour" – that is, combine red green and blue and you get white. CMY is called "subtractive colour" – take all three elements away and you get white, add them together and you get black.

Unfortunately, RGB is not used in conventional printing, where CMY, or "process colour", is the norm. Most colour laser printers, inkjet printers and dye–sublimation printers, as well as imagesetters – in fact anything more advanced than the dot matrix printer – work on the CMY model.



Screen representations of some Pantone colours

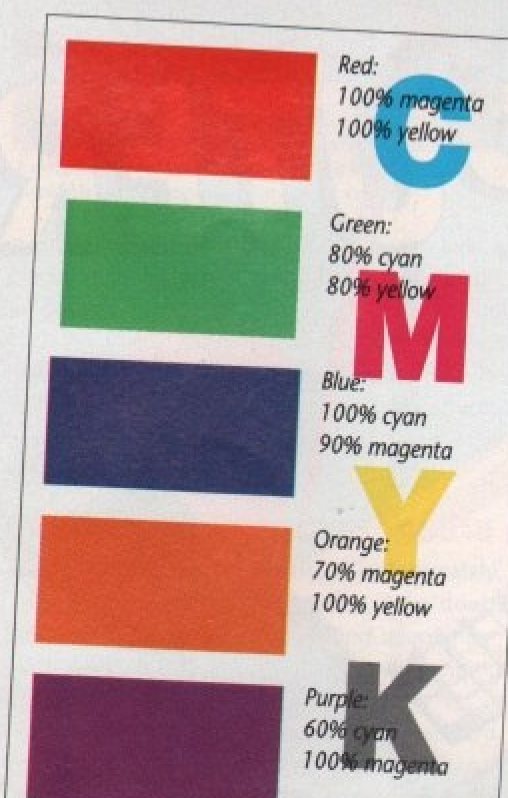
A roll of paper on the press has each of these inks printed in turn, building up an almost infinite variety of colours in their combination. But it's the translation between these two colour systems, RGB and CMY, which can cause difficulties for the desktop publisher.

In the CMY model, colours are specified as percentages. For instance, a warm red is usually achieved through a combination of 100 per cent – or solid – magenta and yellow, and this would be specified as 100M 100Y. A rather queasy green might be achieved by combining yellow and cyan in the the proportions 40C 60Y.

In fact printing presses, along with colour lasers and inkjet printers, use a fourth black ink rather than combining CMY to produce black, hence the moniker CMYK (Cyan, Magenta, Yellow, and blacK, or Key depending on whom you listen to).

Designers sometimes add a bit of another colour to the black to produce a richer effect, but the separate black makes economic sense, otherwise black-and-white jobs would, effectively, be three-colour jobs.

Nearly all colours can be reproduced using the CMY system, but special effects, such as glittering gold, require special inks called Pantones, manufactured by a company of the same name. There are now 1,012 Pantones available – the number has recently been increased – and the company supplies designers with a book of samples, showing what each Pantone looks like on both coated and uncoated paper.



Colours specified as percentages in the CMYK model

Only simulated

The designer then specifies the required Pantone, and the paper goes through a fifth stage on top of CMYK, in which this Pantone ink is applied. An increasing number of DTP applications allow the user to specify Pantones, but because special inks are required they can't be printed on computer printers, only simulated, and then sometimes pretty badly. Moreover, the weird and wonderful attributes of Pantones mean their screen display is far removed from the reality.

Even with simple CMY printing, problems arise in the software conversion between the RGB and CMY models – in the limitations of monitors, which can rarely produce the same fine gradations of colour as the CMY process, and the different reflective qualities of screens and paper. As Nicola found out with those socks, colour is, at best, a subjective thing.

Barnaby Page is editor of PrePress magazine and a DTP consultant. He can be reached on CIX as 'barney'.


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What's on

Jolyon Ralph with the word on some of the early CDTV releases

Even though the CDTV has not been on sale for long, there are now over 60 titles available, ranging from Lemmings to the Illustrated Holy Bible.

I have now had the chance to look at quite a few of the early releases on CDTV, some of which I've perused in greater detail than others.

Although some of the titles are very impressive, unfortunately most seem to have been rushed for early release. But with the launch of a new product like CDTV this is inevitable.

The first products I looked at were Lemmings and the Hutchinsons Encyclopedia. These come free with the CDTV in the UK.



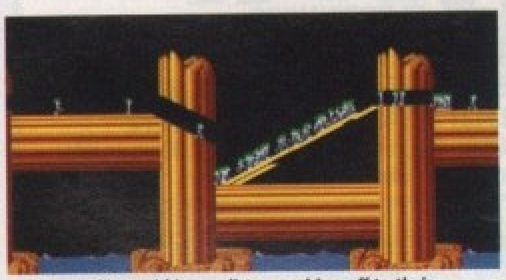
Captain Kirk's five year mission continues through the 24-bit world of the Harlequin frame buffer

Lemmings

Lemmings, from Psygnosis, is fun. If you haven't played the Amiga version of this classic game, you've missed out on a real gem. It involves trying to guide a group of mindless creatures from one side of a level to the other while avoiding all sorts of traps and dead-ends. Really addictive stuff.

The CDTV version is almost identical to that on the Amiga. The only change is that two player mode has been removed – because the CDTV comes with only one controller – and the "B" button now pauses the lemmings so you can move the cursor to select an icon. This doesn't ruin the gameplay because the clock is still ticking down in the corner.

The CDTV version of Lemmings comes with a bonus animation for a possible future Psygnosis game called Planetfall. It's a very long, ray traced



A troupe of intrepid journalists marching off to their inevitable end. A long drop after a short career

animation of a futuristic jet fighter flying over a fractal landscape, chasing and finally destroying a cruise missile.

If Psygnosis' claim – that they will have an interactive game with graphics like this – is to be believed, the CDTV will have some amazing software for it by this time next year.

Hutchinsons Encyclopedia

The Hutchinsons Encyclopedia is, unfortunately, pretty poor despite the fact that it no doubt holds a lot of extremely interesting information, with over 20,000 entries on subjects ranging from Akko to Zygote.

Browsing for entries is particularly awkward, involving selecting each letter in turn from an A to Z list at the bottom of the screen, much like the method for entering high scores for games.

Once you have selected the first letters of the entry you are searching for, you get a list of possible entries at the top of the screen. For example, entering "COMMOD" gives entries for "Commodity" and "Commodus, Lucius Aelius", a pretty unremarkable Roman Emperor. There is no entry for Commodore, you will notice, and neither is there an entry for CDTV.

The main problem with Hutchinsons is that it is dreadfully boring. There are a few still photos, and snatches of digitized audio, but it still feels like it belongs in a reference library.

Multimedia is meant to make things fun, but it hasn't worked for Hutchinsons. As a free disk it's OK, but it's certainly not worth the £49.99 they would have been selling it separately for.

24-bit art

Everybody seems to be talking about 24-bit graphics nowadays. There has been an explosion of cards and add-on boxes providing all sorts of extra graphics modes for every Amiga and to suit almost every pocket.

Ranging from the £299 HAM-E to the £1,500 Harlequin board, these products have one purpose: to provide better quality graphics on the Amiga.

But these boards also have one major drawback: they are all completely incompatible. To make things worse Commodore will, no doubt, soon launch their A2410 graphics board for the Amiga 2000 and 3000. At the moment this only works under Unix, so don't expect it too soon.

Until one of the products establishes itself as the standard you won't find much software that will support these products. In America a standard appears to be emerging – which, unfortunately, is probably the least technically capable of all of the options: Digital Creations DCTV.

Commodore even appear to be backing this as the official 24-bit upgrade for CDTV. At the moment DCTV is NTSC only, so it won't work on European PAL systems. A PAL version is being worked on, but it won't be here for a while.

The Video Toaster also has a 24-bit-quality display, and yet again, this is NTSC-only, with a PAL version a long way off. The Video Toaster has proved immensely popular in the States; already third party software and hardware is being written for the Toaster.

All of these add-ons – with the exception of the higher resolution boards like the Harlequin, and the Toaster, which is much more than just a 24-bit card – may be rendered obsolete overnight if Commodore release the new super-enhanced chipset they are rumoured to be working on. This will have DCTV/HAM-E quality graphics built-in to the Amiga chips.

Which one?

So, with two possible official enhanced colour options from Commodore, and the success of the – currently – NTSC-only DCTV and Video Toaster in the States, which do software developers choose to support?

In the States most software that supports 24-bit graphics directly uses the DCTV box. HAM-E and DCTV have an advantage in that their graphic modes allow most software that can display IFF images – like slideshow programs, Can-Do, AmigaVision and even Amos – to display their 24-bit images directly.

Most software developers are waiting for a standard to develop. Deluxe Paint IV from Electronic Arts, for example, does not support any 24-bit graphics board.

Within a year a standard for 24-bit will have developed. At the moment it looks like DCTV and Video Toaster – since they work well together – will become the leaders in the States, with the HAM-E board being the best seller in Europe. Of course, who knows what new products will emerge in the next few months?

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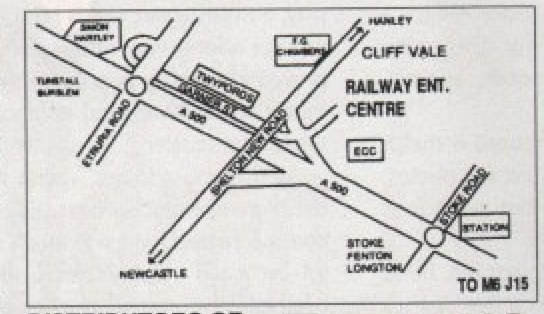
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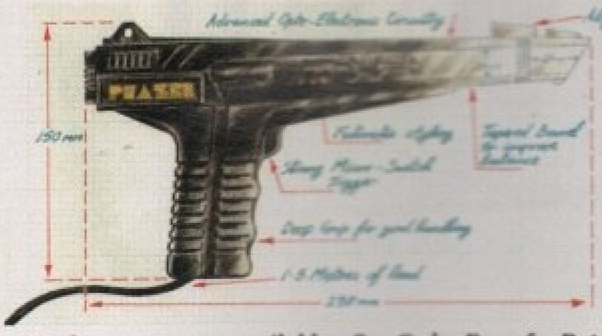
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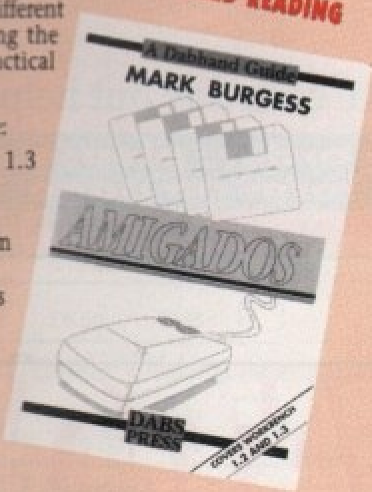
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The reason some people can't find us is because we sell out alarmingly quickly. The sad fact is some newsagents don't carry enough copies of your favourite Amiga magazine (boo hiss!).

Perhaps the easiest first course of action would be to snip out the form on this page and hand it to your newsagent. If that doesn't work, send the tanks in!



Behind the scenes

There is nothing quite as occasional as a Rock Lobster series. In this latest voyage through the unknown we are taking you, the humble Amiga owner, behind the scenes of some of the most powerful institutions in the land.

We are starting off with 17-bit Software, those really nice guys who gave their entire library away to one of our readers last month. That prize is going to take a lot of disk duplication and these are the guys to do it! When you are tucked up in bed reading *Viz*, think of these guys pointing and clicking through the night.

Any other PD companies who want to send in mug shots are more than welcome to do so. We might even print them.

Two disk or not to disk?

Our more observant readers will have noticed three things. Firstly, the Amiga Computing logo looks violently ill this month, secondly there is only one pellet of plastic sellotaped to the cover and probably most importantly, we are a meagre £2.99 again.

What did you think of our double disk issues? Do you think a usable demo of commercial software is worth the extra 76p we charged?

Like the extra charge or not, it has given us an idea for a competition. What we want you to do is write down ten things you can do with 76p. They can be funny, clever, downright boring even, but we are interested to know how 76p would change your life.

Send your entries to 76p, Rock Lobster 42, Amiga Computing, Europa House, Adlington Park, Macclesfield, SK10 4NP.

You had best deduct 24p from the 76p in order to pay for a stamp. The best entries will win a "suitable" prize.

Dear Mr & Mrs Newsagent

AMIGA COMPUTING

Please reserve me a copy of each and every month. I would like to start with the DECEMBER 1991 issue which you should have for me on the first Thursday of November

Name ________________

Address ________________

____

____

Please deliver it/I will bring a fork lift and pick it up

Notes to Newsagent:
Amiga Computing is published by Europress Publications and is available on full SOR from Comag
Amiga Computing is a brilliant magazine and you should order an extra six and display them full-face



The Birmingham User Group (BUG) really know how to have a good time! Pictured here you see the BUG bigwigs letting their hair down at a no holds barred party to celebrate their tenth birthday.

Happy birthday guys, and go easy on the Vimto!

Next month's AMIGA COMPUTING

The next action packed instalment of *AC* will be in the shops on Thursday 7 November, 1991. You can't afford to miss it.

Now you too CanDo!

Yup, it's a fair cop! Many thanks to everyone who wrote in to tell us there was a problem with last month's CanDo giveaway.

I won't bore you with too many details, but basically INOVAtronics, the people who make CanDo, left a couple of small but important files off the disk.

Why didn't we notice I hear you scream! Well, our tutorial was written using a fully working version of CanDo.

Why? because we couldn't hang on for the coverdisk master to arrive from the States before we started putting the magazine together.

Anyway, in true *Amiga Computing* fashion we have put everything right this month. In the utilities drawer of this month's coverdisk you will find a CanDo icon. Point and click to add the missing files to your CanDo collection.

ADVERTISERS' INDEX

GAMER

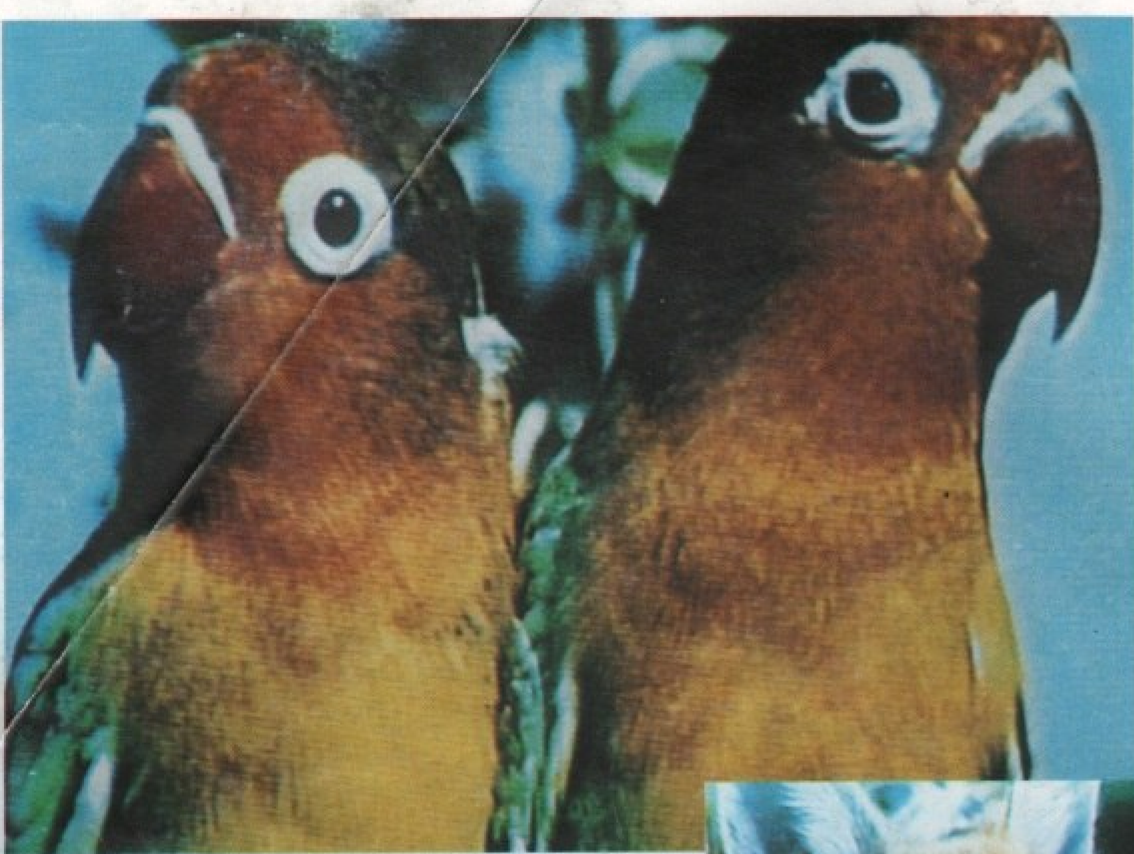
NEW

THE COMPLETE COLOUR SOLUTION

Visit us at World of Commodore Exhibition Earls Court 2 14th-17th November Stand B16

£179

Vidi ... No 1 in UK & Europe (Leading the way forward)



Amiga Computing: The best Amiga digitiser has had the technicolour treatment. Vidi must be one of the most exciting peripherals you can buy for your Amiga.

Micro Mart: When I first saw Vidi "in the flesh" as it were, at the CES show last September it looked to be the answer to a frustrated Digi View owner's dreams – in fact to see pictures appearing on screen without the customary two minues wait seemed almost too good to be true. I have consistently produced more good quality pictures in the short time I have had Vidi than I ever did with Digiview.

Zero: Now under normal circumstances cheap usually means poor quality but this is not the case with Rombo. Why? cos Vidi-Amiga is the best digitiser for under £500 and I've tried them all.

Amiga Format: Where quality is concerned, Vidi produces some of the best results I've seen on any digitiser at any price.

Amiga User International: The latest addition to the Rombokit is called Vidi-RGB and brings this already impressive package to the realms of totally amazing. CONCLUSION: Who will find Vidi-Amiga useful? The answer to this is almost anyone with a video recorder or camera and a passing interest in graphics.

Get the most out of your Amiga by adding:

"The Complete Colour Solution"

The Worlds ultimate creative leisure product for your Amiga. Capture dynamic high resolution images into your Amiga in less than one second.

And Look No Filters

Images can now be grabbed from either colour video camera, home VCR or in fact any still video source. The traditional method of holding three colour filters in front of your video camera is certainly a thing of the past. Because Vidi splits the RGB colours electronically there are no focussing or movement problems experienced by some of our slower competitors. Lighting is also less of an issue as light is not being shut out by lens filters. Put all this together with an already proven Vidi-Amiga/VidiChrome combination and achieve what is probably the most consistant and accurate high quality 4096 colour images ever seen on the Amiga.

The colour solution is fully compatible with all Amiga's from a standard A500 to the ultimate A3000. No additional RAM is required to get up and running.

You will see from independant review comments that we are undoubtedly their first choice and that was before the complete solution was launched. If you have just purchased your Amiga and are not sure what to buy next, then just read the comments or send for full review and demo disk.



Actual unretouched digitised screenshot

Features ...

- Grab mono images from any video source
- Capture colour images from any still video source.
- Digitise up to 16 mono frames on a 1meg Amiga.
- Animate 16 shade images at different speeds.
- Create windows in both mono & colour.
- Cut & Paste areas from one frame to another.
- Hardware and software brightness & contrast control.
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- Full Palette control.
- Add text or draw within art package.



ROMBO Limited

Full colour demonstration disk available for only £1.95 to cover P&P.

6 Fairbairn Road, Livingston, EH54 6TS. Tel: 0506-414631 Fax: 0506-414634

How to get your HAKPAK filer folder

After literally minutes of practice the Gamer team have mastered a magic trick of Wayne Dobson-like proportions. Yes, you send us three tokens (token 2 with this issue) and a cheque or postal order for £1.99 and we'll change them into a smart **Hakpak filer folder**. Make cheques payable to **Europress Direct** and sent to:

Hakpak Offer, Europress Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB

Alternatively, if you just can't wait to get filing simply send £3.99 to the very same address, no tokens, no waiting and, er... no £2 off!

GAMER GOLD TOKEN TWO

PLATFORM

GAMER HAKPAK

Horror Zombies from the Crypt

Millenium

If you enter the password as **CUSTODES** or **CHEATMODE,** if you can press **F10** during the game to skip levels. If invulnerability is more to your taste then enter **BOGIE EATER** to defeat those deadly zombies. To make the horror tamer, hold down **M** and the full stop for infinite lives.

James Pond

Millenium

To enter the cheat mode section, type in **JUNKYARD** and press **Return** during the game. James Pond will now have a protective bubble around him, which can be toggled on and off with Return.

While the cheat mode is active, pressing the **D** key a few times will unlock all the mission pipes. Pressing **F7** increases the size of the screen and the speed. **F6** and **F7** at the same time will return the screen to its normal size.

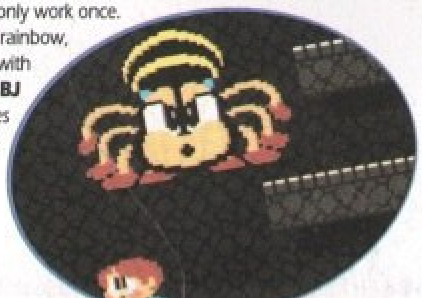


Pressing any letters on the bottom row of the keyboard (**Z**, **X**, **C**, etc) will transport you to different levels. If you press **F10** the border will flash different colours, although it won't help you much on your environmentally sound mission.

Rainbow Islands

Renegades

Type in one of the following codes on the title screen and press Return afterwards. These cheats only work once. **SSSLLRRS** gives you fast rainbow, **RFSBJSBR** provices you with double rainbow, **BLRBJSBJ** kits you out with fast shoes and **RRLLBBJS** makes all hidden food turn into money bags.



SHOOT-'EM-UP

GAMER HAKPAK

The Spy Who Loved Me

Domark

You'll go completely undercover if you type **MISS MONEYPENNY** on the introductory screen, and you'll get infinite lives.



After the War

Dinamic

During the first stage press **Alternate**, **B** and **1** simultaneously for infinite energy and **Alternate**, **M** and **1** to jump to the second stage.

Awesome

Psygnosis

Hold down the plus key on the keypad and press **fire**. During play, the **F1** key disables enemies while **F6** replenishes energy.



BEAT-'EM-UP

GAMER HAKPAK

Ivanhoe

Ocean

Pause the game with **P** and then type in **ZOBINETTE** and press **Return**. Unpause the game and press **N** to advance a level, **DELETE** to kill all attackers onscreen, semi-colon to get to extra levels and Control to erase the big guy on the bonus screens.

Sword of Sodan

Electronic Arts

Type in **NANCY** on the high score table to get infinite lives. You will also be able to skip levels by pressing **Return**. To complete the game get to level 11 and press **Return** to see the end sequence.



Torvak the Warrior

Core Design

Get to the high score screen and type in the following: **CHEAT** followed by three full stops. When you get to the map screen just before the start of the level, you can access levels two to five by pressing the corresponding function key while holding down the fire button. When you release the fire button you will find yourself at the start of your chosen level.

Vigilante

Ocean

Get to the high score chart and enter **GREEN CRYSTAL**, remembering to include the space. This enables the cheat mode. Pressing **F1** increases your lives and pressing **F8** skips levels.

GAMER GAMER GAMER GAMER GAMER

GAMER HAKPAK

SHOOT-'EM-UP

Line of Fire
US Gold

If you type in **OPERATION FERRET**, including the space, on the joystick select screen, you'll be totally immune to the enemy's fire. Now you should fly through the game, no problem.

Ooops Up
Software Business

Try these level codes to get to the higher reaches of the game:

4799
A234
ER7E
DK39
R2T7

Rambo III
Ocean

Type in **RENEGADE** on the high score table and press **1**, **2** or **3** depending on which level you want to start. Colonel Trautman should soon be in your grasp.

GAMER HAKPAK

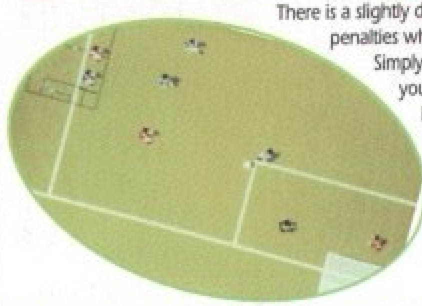
SPORTS

APB
Activision

If you enter your name as **ALF** in the high score table of Domark's APB, you will be able to get an infinite number of demerits without the game ending.



Kick Off Extra Time
Anco



There is a slightly different way of saving penalties when this extra disk is used. Simply switch on the autofire of your joystick – or repeatedly hammer the fire button – and the goalie will save the ball every time.

Outrun
US Gold

Type in **RED BARCHETTA** during play and then press **T** to gain extra time or **G** to warp to the next stage.

GAMER HAKPAK

SPORTS

Lotus Esprit Turbo Challenge
Gremlin

Enter player one's name as **IN THE BIG COUNTRY**, ensuring that you include spaces after each word, and player two's as **CHARIOTS OF FIRE**, again, include spaces between words. No matter in what position you or your partner cross the finishing line, you will always qualify for the next round.

Hidden deep in the game is a shoot-'em-up. Seriously! If you enter player one's name as **MONSTER** and player two's as **SEVENTEEN** you will find it.

Super Hang-on
Ocean

Instead of entering your name on the start screen, type in **YH50.** This will make your bike faster than any other on the circuit. It will also give you improved road handling and a handlebar-mounted machine gun. Type in **750J** for a surprise bonus.

